

serrations of these jagged ridges are formed by the projection of the harder rocks, which also continue all down the hill-side making projecting ribs.

A great part of the surface of these hills¹ is of the bare grey sandstone rock uncovered by soil, but in some places grass and bushes have got a footing upon it, and here and there is cultivated space enough to support a family or two, or a little hamlet, but of necessity it is a tract very thinly peopled and difficult of access. To go over this ground is not easy; the paths from hamlet to hamlet are but tracks marked by the passage of feet over the sandstone, or sometimes down steps cut into it; from the inaccessibility of the cliffs, and the steepness of the ravines, the ways are tediously roundabout, and they are tiresome from the frequent rise and fall.

This irregular combination of ridges, which sometimes trend north-west and south-east (with the strike), and sometimes run across that direction (at right angles to the strike), continues, as one goes on, to a distance of ten or twelve miles from the outer skirt of the hills; then we come to a wide longitudinal valley, such as is called in the more eastern Himalayas a *dūn*.

The height of the more important of these ridges is commonly as much as 2500 feet above the sea, and in the eastern parts they rise even to 4000 feet. There is always a fall of several hundred feet to the valley or *dūn*; this is not in one step, but more by the ridges becoming lower in succession; Dansāl, a large village in the middle of this *dūn*, is some 1800 feet above the sea.

The flat valley varies in width from one to four miles; it is itself cut through by ravines; close by Dansāl a branch of the Tavi flows along in a steep-cliffed ravine at a level some 200 feet below the flat of the main valley; the Tavi River itself flows in a similar ravine, and at that low level winds across the *dūn*.

This longitudinal valley continues from some miles north-west of Dansāl to Basoli on the south-east, with the exception that about midway, near Rāmkot, it becomes narrowed up and indefinite; east of that place it again widens, and thence on to Basoli the space may be described as a plain or a vale, being low

† [i.e., in Jammu -- ANALYST]

84 PHYSICAL CHARACTERS OF THE OUTER HILLS. [CHAP. II.]

133^x ground bounded by the ridges north and south of it, itself cut across by the valleys of many torrents that come from the northern mountains. The width of these cross-valleys is sometimes a mile, and sometimes only a hundred or two yards; the sides of them are rocky banks, one or two hundred feet high, at the summit of which is the flat of the dūn.

The inner or northern boundary of this Dansāl and Basoli dūn consists, in the eastern part, of the spurs of a considerable range of mountains which belong to our next tract, and which here end off the region of the Outer Hills; but from about opposite Rāmkoṭ for five-and-twenty or thirty miles to the north-west, intervenes another range of hills and another valley, which make a space that must be classed with what we have been describing. The range goes by the name, along a part of its length at all events, of Karāī Thār, the latter word of which is the equivalent of "ridge." It has a steep face, an escarpment, to the south-west, for here the beds are dipping to the north-east. Near Rāmkoṭ its height is 5000 feet, there it curves round and joins on to the higher mountains; in the direction of Dansāl 3500 or 3000 feet is the common height of it. This range, too, is traversed by the Tavi in a gorge; one of the main roads to Kashmir crosses it near Dansāl by a very steep ascent; a few miles north-west of that it dies away. Nowhere is it a simple ridge; when one has crossed the main line and descended, other smaller rocky ridges have to be passed.

• [487] When quite clear of this Karāī Thār we come into the succeeding valley, which is another dūn, that on which the town of Ūdampūr stands. It is a space some sixteen miles long and five wide; it is a flat cut through in broad valleys which lie at a level of about 150 feet below it; so much has been cut away by these and by their smaller branch ravines that the extent of the higher flat is not greater than that of the bottoms, so that the whole space may be described, perhaps with equal truth, either as a flat much cut down into wide hollows, or as a low vale with wide flat-topped hills jutting into it from the mountains.

This dūn narrows up on the north-west towards the lofty hill called Devī Thār; it is bounded along its north-eastern side

133^x For the origin of these two hollows I have no theory to put forward; they are rock-basins, the rock being either a soft sandstone or sandstone with clay interstratified. I do not know their depth, but do not think it great; there seem to be springs of water in the lakes themselves; they deserve a more careful examination than I made of them.

WEST OF THE CHĪNĀB.

361
487 We will now look at a few places to the west of the Chīnāb river, in the Muhammadan country.

Akhnūr, which is the first town, will most naturally come into the next chapter, as it lies on the road there to be described.

Bhimbar, 40 miles farther west, is a rather flourishing town. The Rajas of Bhimbar had their castle here; some of it still stands; it was a collection of buildings with loop-holed walls, making an enclosure 400 or 500 feet long and less than half that in width.

Placed, as this town is, at the beginning of the hills, it is the starting point in the mountain journey between the plains and Kashmir by the old royal road. When the Mughal Emperors of Delhi used almost yearly to visit Kashmir they commonly followed this route by Bhimbar and the Pir Panjāl, and at this day English travellers use it as much as or more than any other.

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361 Here, and at almost every stage on to Sīrīnagar, are remains of *sarāes*, or rest-houses, built for the royal camp.

At Bhimbar there was a greater variety and extent of accommodation provided than at most of the stages, for here the camp used to concentrate, and hence proceed by detachments along the difficult hill-road, where means of carriage were and are limited. First, in the higher part of the town of Bhimbar, there is a *sarāe* built of brick and sandstone, a square of about 300 feet. On each of the four sides are seventeen double cells or rooms with dome roofs, the inner room 10 feet square, the outer one 10 by 6; the height of these rooms is 10 feet at the upper end of the building; those opposite, which are built on lower ground, are made some feet higher, so that the wall is kept of one level. The outside wall

a sharp rocky ridge—20,000 and 21,000 feet high; some are so steep as to bear little or no snow; some are thickly clothed with it. A glacier occupied a hollow, and extended towards us for some miles, but ended off still high up. The rocky ridges and precipitous spurs that lead down from the peaks are on a very great scale; a thousand-foot cliff would count for little among them. At the lower part of the slopes, wherever a little ledge has enabled the seed to lodge, deodar-trees crown the rocks. The river washed the foot of the spurs at a level of five or six thousand feet. 133^x

Passing on round mountain spurs on our own side, we suddenly come into view of the inhabited part of Pādar, which is altogether on the south side of the valley. There are a number of villages occupying ground sloping to the river, backed by lofty wooded and snow-capped hills. The road brought us down to the level of these villages, and then led us along the river-side for a few miles to Atholi, which is the head-quarters of the district. [361]

Besides the road by which we had come from Kishtwār, which is the summer road and does not open till May, there is another that may be traversed in the winter when the water is low, for then some of the obstacles—the steep cliffs—can be turned by taking to the river-bed. There are, however, some parts of this which make it a very difficult path; it is impossible to take ponies along it; the upper road indeed is hardly fit for them, but the few that go in and out of Pādar go by that way, only at some risk. 487 ●

PĀDAR.

The space included under the name Pādar consists of the valley of the Chināb from a little below Sirl, our last stage, up to the boundary of Pāngl, which belongs to Chamba, a length of 30 miles, with, in addition, the valley called Bhutnā up to its source, and the subsidiary ravines of both the Chināb and the Bhutnā River.* 131

* Pādar is, I believe, the proper native name. Sometimes by the Dogrās, and more often by the Zānakār people, it is called *Pāidar*, or *Paidar*. Cunningham (see his 'Ladak,' pp. 342-344) confounds it with Padam, the chief place in Zānakār; this mistake curiously confuses a portion of his otherwise admirable account of the conquest of Ladākh by the Dogrās.

so far as it went, it was a sign of disobedience against, a disavowal of, the authority of Maharaja Gulāb Singh. That ruler had Ratautā brought to him at Jummoo, but then forgave him. 976-

BHUTNĀ.

We have seen that Pādar includes the valley called Bhutnā, which leads down from the great snowy range till it joins the Chināb Valley. From Pādar a road goes up Bhutnā and crosses to Zānskār by the high, snowy, and difficult Pass named Umāstī Lā by the Zānskār people, and Bardhār by the Pādar people and the Dogrās. I passed from Pādar over this Pass to Ladākh, but I do not propose to tell of the journey, only to take the reader up the Bhutnā Valley to see what there is of interest on this side of the snowy range. 133* [487]

Crossing both the Chināb and its tributary, we went along the right bank of the latter by a fair path, sometimes 200 or 300 feet above the stream, and sometimes at the level of it. We passed patches of cultivation on both sides, and several hamlets of a few houses each; some of the villages had walnut-trees flourishing, but their fruit does not here ripen well. At one part we went through an oak wood, which grew on both hill-sides. Deodar had been growing, chiefly on the left bank above the oak, and farther up the valley it had reached down to the river, but it had all been felled for timber. [361]

These hill-sides which we passed along, as is commonly the case in the narrow Himalayan valleys, were the extremities of spurs from greater ridges; they themselves showed us a face of some thousand feet, but they were connected with much more lofty mountains, mountains of perpetual snow, 18,000 to 20,000 feet high, which are only sometimes caught sight of through the dividing side-ravines.

Above Kundhel we see instances of a fall of rock having dammed the river. Going upwards, we first find the water coming over the talus or fan-material (the cause of the damming) in a cataract, while immediately above the valley opens, and the waters spread out almost wide enough for them to be called a lake.

CHAPTER VII.

MARCH FROM JUMMOO TO KASHMIR.

ROUTES FROM THE PLAINS TO SIRINAGAR, IN KASHMIR—PREPARATIONS FOR THE JOURNEY—JUMMOO TO AKHNŪR; ONE MARCH—TIMBER CATCHING AT AKHNŪR—AKHNŪR TO RĀJĀORĪ; FIVE MARCHES—RĀJĀORĪ TO SIRINAGAR; EIGHT MARCHES.

AFTER the Middle Mountains, the next tract that will have our attention is Kashmir. Before, however, beginning on that country, I propose to give, in this separate chapter, some account of the roads, but especially of one of them, between the Panjāb and Kashmir, both for an example of the kind of travelling one experiences in such countries as these, and for the sake of connecting in the reader's mind those parts which up till now we have dwelt on with the countries beyond.

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ROUTES FROM THE PLAINS TO SIRINAGAR, IN KASHMIR.

The statement of the number of routes between the plains and Kashmir may be varied, the number may be made greater or less, according as one takes in or leaves out the less frequented, difficult, roads, and according to whether one counts the combinations that may be made by following first one route, then by a cross-road joining another. In the Political Map are shown six or seven routes that start from various parts of the plains and unite at Sirinagar the capital of Kashmir, and in Appendix IV. the marches in each route are given in detail.

The various roads are used in different degrees and for different purposes.

The road from Jummoo by Banihāl is the chief commercial route. It has become so for the reason that its starting-point in the hills is not very far from Amritsar, the emporium of the Panjāb, between which place and Jummoo there has long been a close commercial connection, while the road is open for more months of the year than some of the others.

[438]

487 months of the year than some of the others. But the path itself
494 is not good, nor is the country it goes over favourable to communications; there are five distinct ridges of hill to be crossed, besides many ups and downs over spurs that cause almost as much labour as do the passes. Horses can pass along it, though with some difficulty; the greater part of the carriage is done by men, or, in the case of grain, by pack-bullocks.

The second road, by Budil, is so far worse than the last that it is impassable for horses; it is only traversed by men, chiefly by those engaged in carrying up loads of salt and bringing down gñi.

No. 3 is a cross-road from Jummoo to join the next.

The road numbered 4, from Bhimbar over the Pír Panjāl Pass, is the one, as told in Chapter v., that the Delhi Emperors used to go by, and that at this day English travellers much frequent. It is a road that one can ride over on a hill pony.

The next, from Bhimbar, by Rājāori and Pūnch, to Sirinagar, is a combination of numbers 4, 5, and 6. It avoids the high Pír Panjāl Pass, and for that reason it is freer from snow, and open for traffic earlier in the season, than the preceding one.

The route marked No. 6, from Jhelam, is not much used, since it traverses rough ground. In some respects, however, it has advantages over the others. It seems to me likely that when the railway from Lāhor is completed as far as Jhelam, that place will become a good starting-point for Kashmir, and this road may get more into favour, and merit a better construction and maintenance.

Route No. 7, from the British Hill-station of Mari, or Murree, is not much used for commercial purposes, but is a great deal frequented by English travellers. One can now go right up into the hills, to Mari itself, by post-carriage, and there, already in cool breezes, can at leisure prepare for the march to Kashmir. The road, too, is about the best of all; horses can go along it without danger.

Route No. 8, from Abbotābād by Muzafarābād, is the only one that is free, or nearly free, from snow in the winter; besides this

CHAP. VII.] PREPARATIONS FOR THE JOURNEY.

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it has the advantage of not going over high ground, the ups and 487
downs in it are trifling; hence it is a convenient road for those 494
whose way, from Kashmir, say, lies in the direction at Atak and
Peshāwar.

Not all of these roads are open to the English traveller (whose [486]
journeyings involve special arrangements); the first three are
closed to him. The others have been open to Englishmen for six
months of the year. Quite lately new arrangements have been
made; I am not sure whether or no this restriction about time
has been taken off. There is now, I believe, a limitation of the
number of officers of the army who may go to Kashmir for their
leave; 200 at one time are allowed. The justification for this is
the great requisition for carriage that, as will be seen below,
each British traveller is sure to make.*

The road I have chosen, for ourselves to look into the par-
ticulars of it, is a combination of Nos. 3 and 4. We shall go from
Jummoo in a north-westerly direction, so as to cut into the road
from Bhimbar at Rajāōri, and from there onwards to Sirinagar.

PREPARATIONS FOR THE JOURNEY.

A few words before starting, as to certain specialities of travel- 484
ling in the Himalayas. 565

The natives of India are good travellers. The poor man, one
who gets his living by the use of his muscles, will make a bundle
of his extra clothes (if he has any), of his bedding and his cooking-
pots, and with that balanced on his head or slung over his shoulder,
will make a long march without asking anything of anyone, except
of the shopkeeper from whom he will buy his daily allowance of
flour or rice. The class above him, those who get, say, their living
by their pen, or by buying and selling, will surely have a pony for
the march, probably a quiet, useful animal, one that ambles along
at an easy pace; the bedding will be laid in folds on the saddle,
and the rest of the baggage carried on the pummel or else made

* Some useful information about those routes which are open to European tra-
vellers will be found in Dr. Ince's 'Kashmir Handbook' (published by Wyman
Brothers, Calcutta); and in Kashmir itself that book will be found very useful.

175 something through the British Government, which he enjoys at
631 Wazirābād.

177 Rājāori has one conspicuous building raised by its last, the
361 present, rulers. A large temple, elevated on a rock by the river,
[346] shows to all that Hindū power has again spread thus far west.
As another sign of this, the Dogrās have changed the name
of the place to Rāmpūr, thus designating it after one of their
gods; this new name has displaced the old in official dealings,
but not in the mouths of the commonalty.

RAJAORI TO SIRINAGAR: EIGHT MARCHES.

133^x We have hitherto in our journey been among the Outer, the
487 Lower, Hills; in these next marches we shall get over the higher
ranges of mountains, those that are the great barriers of Kashmir.
The first two days' march from Rājāori will take us northward
over the Ratan Ridge by a pass that is called the Ratan Pir; the
next four will lead us eastward through the main Panjāl Range
(of which the other was a branch) by the pass called the Pir
Panjāl, and will bring us down to the level and out into the wide
opening of the vale of Kashmir; the last two are wholly within
that valley.

The following is a list of the eight marches, still numbering
from Jummoo:

	Miles.		Miles.
7. Rājāori to Thanna ..	14	11. Aliābād to Hirpūr ..	14
8. Thanna to Daramgalla ..	10	12. Hirpūr to Shapeyan ..	6
9. Barangalla to Poshiana ..	10	13. Shapeyan to Kahnūr ..	15
10. Poshiana to Aliābād Sarā ..	11	14. Kahnūr to Sirinagar ..	12

[311] In the first march, from Rājāori to Thanna, we keep for 14
miles in the same not wide valley, following up this western Tavi
stream, rising by a gradual incline. The ground of the valley
is all terraced and made into rice-fields, which at this time are
flooded with water led from the stream in preparation for the
sowing, which will be done a week or two later. The valley is
closely bounded by spurs of hills, which change their look as we
near the end of the march, for we then get among a higher class

of hills, such as we have all along called the "Middle Mountains"; at Thanna we have reached to the foot of the slope of the Ratan Ridge itself. 133^y
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In the march from Thanna to Baramgalla we go over the Ratan Pir.* It is a good steep pull to reach the summit, which is 8200 feet above the sea; there is hardly any depression in the ridge at that spot. On some of the slopes the mountain is thickly covered with forest, a forest of much variety and beauty. Box grows here largely; it is cut and sent to the towns, where it is mostly used for making combs. On the higher parts of the ridge one meets with numbers of the great black and grey monkey, called *langūr*. [136]
[137]

From the Ratan Pir one looks north and north-eastward on to the Panjāl Range, and obtains grand views of its mountains. The descent also gives beautiful prospects, both of near forest views and of the more distant hills. The road is rough and difficult; one's pony, that was useful for the ascent, had best be allowed to go down the hill without a rider.

Baramgalla, which is the halting-place, is in the valley of the stream that rises near the Pir Panjāl, and with many others goes to form the Pūnch River. It is shut in closely by spurs of the hills.

The next march, from Baramgalla to Poshiana, is along the bottom of the narrow valley, among the large rounded stones of

* In these hills the word *Pir* has come to be used more or less generally for *Pass*. The history of its acquirement of this meaning I conceive to be this. *Pir* in Persian means first, *old*, or *an old man*, and thence a saint or *faqir*. It is common for faqirs to establish themselves on *Passes* for the sake of contemplating the works of God and of receiving the alms of travellers; when any noted holy faqir died on a *Pass*, the place became sacred to his memory, and was often called after him, his title of *Pir* being prefixed; at last it became so common for every important *Pass* to have a name beginning with *Pir* that the word acquired the secondary meaning of *Mountain Pass*. 792
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Ratan *Pir* must be called so after one Ratan, which is a man's name among the Hindūs. As to *Pir Panjāl*, the latter of the two words is applied to a great mountain ridge, at all events to the one we are coming to, I am not sure whether it is a general word for a range in any language. *Pir Panjāl* now means simply the *Pass* of the Great Range. There was, however, at one time a faqir who lived on it and bore the title of *Pir*. Bernier, who crossed in Aurangzeb's time, says there was a hermit on the *Pass* who had resided there ever since Jehāngir. Bernier wrote this in 1665. Jehāngir reigned from 1605 to 1628; by this the hermit would have dwelt there thirty-seven years at least. I imagine it was from him that the *Pass* acquired the first word of its present name.

133^x the stream-bed. The hill-sides are too steep for the road easily
487 to be made along them, so the traveller must keep close to the river, which has to be crossed about thirty times, as it nears alternately the right and left bounding cliffs. A series of little wooden bridges are prepared, which are good enough for foot-passengers and for an unladen horse, but ought not to be ridden over.

36/ At last we leave the bottom of the valley and rise by a steep ascent on the north, of some hundreds of feet, to Poshiana. This is a small village, the highest in the valley; it is inhabited by Kashmiri.

133^x The march from Poshiana to Aliabad leads us over the chief
487 Pass. The road first contours to the base of the valley; from there the rise to the Pass may likely at this time of year—the latter part of May, we will suppose—be made by keeping in the ravine, on the snow-bed that now fills it. If this has melted, one must rise on the left and keep the narrow path which goes along the hill-side at some height above the bottom.

In rising to the level of the Pass, which is 11,400 feet above the sea, we go through the stages of fir and birch wood, and come to where the slopes are grassy, and the hills above are of rock and fallen stone, with many snow-beds remaining yet unmelted.

One time that I came here I found the Pass, and the ground and the snow for two or three miles' distance, strewn with dead locusts, which about the middle of May had been destroyed by the cold in an attempted invasion of Kashmir.

133^x Between the Pass and Aliabad there intervene some miles of
137 a very gradual descent. From Aliabad to Hirpur, the next stage,
487 the road makes an irregular descent of more than 2500 feet, over rough, and in wet weather slippery, ground. The hills rise up boldly from the bed of the stream (which here, of course, flows towards the valley of Kashmir) for some thousands of feet. Often broken by rock and cliff, elsewhere covered by forests of pine, spruce, and silver-fir, they rise above where these can grow and show an unusually great extent of ground covered with birch-

trees; above this are the grassy summits of the spurs as visible from below; one must rise on to the spurs, and trace them back away from the valley, to get to the region of stone and rock, which would be reached at about 12,000 feet altitude.

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The stream, which flows a little north of east, receives other mountain-streams from both sides, and becomes an unfordable torrent. Descending and crossing it by a bridge, we come to comparatively level ground, clear of the steep mountains. For the next few miles our way is along a charming woodland path where the ground is covered with wild flowers, among them violet, strawberry, forget-me-not, and buttercup, and the fir-wood is varied with many trees and shrubs in bloom.*

The hills on each side get lower, and as we near Hirpūr we find ourselves between what, as compared with the mountains, are mere banks that frame, rather than confine, the view, and let us see a portion of the long-looked-for country of Kashmir.

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But a small part of the vale itself appears; we look across it on to the complicated branched mass of mountains connected with the great snowy range that bounds Ladākh. One knows not how to call it—a wall of mountain—a serrated ridge—a rugged-edged mountain-mass; none of these express what one sees if after the first glance one looks, when the light may favour us, carefully to find out the details of what comes to view. The nearest spurs are 25 miles off; they can hardly be distinguished from out the mass, though they project far in front of it. Behind them, nearly 40 miles off, is a distincter mass of dark mountains which are some 12,000 feet in height; their projecting spur-slopes and the ravines alternating with them can even at this distance be made out. Above this dark mass we see a great extent of pure white snow-covered ground, from out of which rise great snowy peaks. One of these that stood prominent was 50 miles away, and some points within our view were nearly 70.

This was the first great view of Kashmir. But when we

* It is a remarkable fact—one that has been noticed by Dr. Falconer and Dr. Thompson—that on the Kashmir side one does not meet with the oak and rhododendron, although the elevation of the ground corresponds to that where, on the outer side of the Pamir hills, these trees are abundant.

160

MARCH FROM JUMMOO TO KASHMIR [CHAP. VII.

133⁺ reached Shapeyan, the next stage eight miles on, we came to
 ● 487 where we could look back, and on, and all round, and still see mountains without a break encircling the vale. The range we had passed through with days of labour seemed strangely near; it bore great snow-beds with bold rocky peaks projecting as it were through them; in front were dark forest-covered slopes. Opposite was the same great line of mountains we had seen from Hirpūr. The bounding hills of the far ends of the valley, seen only at times of clear atmosphere, complete the ring-barrier of Kashmir.

361 Shapeyan, the first halting-place well within the vale, is a wooden town; through every lane of it water from the mountains flows in narrow canals. From Shapeyan, Srinagar lies north, 27 miles distant, a two days' journey. The intermediate places are Rāmū, at 12 miles, and Kānpūr, at 16; either of which may be chosen to halt at.

133⁺ The road is now nearly level, only some low flat-topped hills
 361 are crossed. On each side fine prospects of the mountains extend;
 487 on the left, of the forest-clad hills overtopped by peaks of rock and snow; on the right, the farther mountain-range that lies beyond the plain; but in parts the road is among the village groves where the eye, not reaching to the mountains, is content with the nearer homely beauties of shady plane or walnut trees, and wild rose-bushes luxuriant in their bloom. As we cross the last of the low hills we look from that higher ground over the low flat, and can see where Srinagar is situated; the position of it is marked by two isolated hills, one of them surmounted by an ancient temple, the other crowned with the buildings of a fort. The last few miles of our ride are across the flat, between rows of tall poplars. We reach the city at the bridge that is the highest up of seven that span the river. As we cross it and see the boats plying up and down, the houses crowded on to the river-bank, of irregular form and varied construction, whose low-sloping roofs with their wide eaves throw deep shadows, the spiry pinnacles of mosques, and the bulging domes of temples, at once we know that in this high valley a busy city exists of unusual aspect and rare picturesqueness.

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great distance from one another. This particular summit is a peak which rises from a lofty ridge that for 10 miles is over 22,000 feet in height; the faces of this ridge, on the east and south, make an enormous cliff, or steep fall, of from 6000 to 10,000 feet, on the greater part of which snow remains clinging, but it is in part of rocky precipices; from the highest point great buttresses radiate. Large glaciers take their origin from the mountain, of one of which a notice will be given in a later chapter. The great ridge and the chief peak are of such a height as to be seen from long distances over the neighbouring ranges of 16,000 feet altitude, which become quite dwarfed to the eyes. General Cunningham has seen the peak from Rāmnagar in the Panjāb, which is distant 205 miles. The sketch on the following page shows the mountain as it appears from the south side of the Kashmir Valley, 80 miles away.

The southern part of the Nangā Parbat Ridge becomes the watershed between the Indus and Jhelam basins, dividing the water that flows into the Astor stream from that which finds its way into the Kishangangā. At this part it is 20,000 feet high, and it originates glaciers on both sides. From here, for 120 miles reckoned on a straight line, we will trace the course of the chain, which takes a general south-easterly direction.

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For the first 50 or 60 miles it is not of such a height—neither in the line of watershed nor in its spurs—as to bear perpetual snow or give origin to glaciers. It seems to be commonly of an altitude of some 14,000 feet, with a few points of 15,000, or a little more. There are several gaps in the ridge that are passable. Two much-traversed roads, which join the Kishanganga and Astor rivers, go over Passes of 13,200 and 13,500 feet, while farther east Passes lead from the former river-valley into the basin of the Drās River; these can all be traversed by laden horses.

After the length of nearly 60 miles the mountains become rather higher; there are peaks of 17,000 and up to 17,400 feet; these collect enough snow to form small glaciers. But the ridge is broken, and a not difficult Pass occurs which directly connects the Tilel branch of the

Kishangangā Valley with Drās. A few miles south of this gap occurs the branching of the mountain mass that goes to make the north boundary of Kashmir; this we will return to, and now only note the spot from which that ridge separates. Again, a few miles farther on, still to the south-east, and we come to where there is a gap in the mountains, which is the lowest passage, between the Indus on the one side and the Chināb and Jhelam basins on the other, along the whole length of 300 miles from the eastern sources of the Chināb to the head of the Khāgān tributary of the Jhelam. This Pass is called Zoji La by the Tibetans, the Ladākhis; by others it is commonly called the Drās Pass. 133^x 487 •

The height of this passage through the mountains is 11,300 feet. An important characteristic of it is that there is a great rise to this level from the Kashmir side, and but a very slight fall on the Ladākh side. Coming from Kashmir we rise steeply, in the last mile or two, a height of about 2000 feet to the level of the Pass; we then find ourselves in a narrow valley, the floor of which descends with so gradual an incline that in 20 miles we do not descend more than 1000 feet. The Pass itself—the high-level valley which is reached after the steep ascent—is a level grassy valley not much more than a quarter of a mile in width. The mountains bounding it are rugged and rocky; the peaks immediately seen are 2000 or 3000 feet above the valley, but the ridges, of which these are the ends, continuing back reach to 5000 and 6000 feet above it, or 16,000 and 17,000 feet above the sea. These mountains belong to the very central range and to spurs from it. By this Pass one rises into the high-level country of Ladākh, where the valley-bottoms are at levels from 10,000 feet upwards. Indeed, if we go anywhere in the Upper Indus basin south of the latitude-parallel of this Pass, we shall find no ground, even in the valleys, so low as 10,000 feet.

Continuing along the main chain, we find that the summits get higher and higher; peaks of 18,000 feet, and some, as we go on, that approach 20,000, occur, and the general level of summits is not much below them. Long spurs, too, or branch

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 ridges, that jut out, are very lofty. Ten miles east-south-east from the Pass a distinct ridge branches off in a direction somewhat west of south, which is the one that, curving round, forms the eastern and southern boundary of Kashmir, and connects on with the Panjál Range; this, too, we shall revisit. Then in some miles more (26 or 27 miles direct from the last Pass) we come to an opening which, though not so low as the other, yet, considering the loftiness of the mountains it passes between, is a considerable depression. This is the Bhot Kol Pass; it leads from the head of the Wardwan Valley into the Surú district. It is a glacier pass, but one over which it is possible to take a horse.

From the Drás Pass hither the peaks have been of a height to form glaciers. There is a glacier in every hollow of the ridge. Many of the branch ridges also hold them in their recesses. These glaciers are usually not large; two or three miles long is common; and they do not generally extend very low; one, however, named the Mechuhoi Glacier, the lowest that I know of near here, has its foot at 10,850 feet above the sea; this is close on the valley of the Drás Pass. Looking from near the Bhot Kol Pass to the north-east, at one view a number of these small glaciers can be seen, embedded in the hollows of the mountains, whose narrow rock-ridges curve round and enclose them.

From the last-named Pass eastwards the range continues at a great height; points on it are nearly 20,000 feet high. Lastly, distant from the Pass 12 or 14 miles, there rise two enormous mountains, each of them a few hundred feet over 23,000. These are called Nun and Kun, or together, Nun Kun. They are peaks that are conspicuous from afar, standing as they do a clear 3000 feet above their neighbours. Their aspect varies much as one looks at them from different sides; from Surú we get a side view, which seems to show that they are projecting portions of a rugged escarpment. The annexed sketch gives their form as seen in front, in a distant view caught of them from the boundary of Kashmir.

Pir Panjál, of the way through which some account has been given. The mountains near it are not quite so lofty as those we have left. Beyond we get to ground as high as any in the Range; especially there is an isolated peak called Tatakúti, 15,524 feet. Again we see by the map that there are tarns in the hollows of the mountains. Beyond this there are some high Passes which lead very directly between Pūnch and Sirinagar; then, behind Gulmarg, we find a summit of 12,500 feet, which is nearly the last of the Range.

I have spoken chiefly of the higher parts of the Panjál Mountains. Of its spurs we saw something on the march over the Pir Panjál; towards Kashmir, the hill-sides—the slopes of the spurs—are in great part thickly covered with dark pine forest; these spurs ultimately become elongated into long low wooded slopes, and these graduate into the sloping karewas.

From the last-mentioned summit spurs radiate and descend, at the last suddenly, in bold slopes and steep cliffs, for some thousands of feet, to the narrow part of the valley of the Jhelam.

THE JHELAM VALLEY BELOW BARAMŪLA.

We have thus, in describing the mountains, completed the circuit of Kashmir and reached again its outlet valley. We before saw that at Baramūla all the waters of the Vale entered the gorge. From that place to Muzafarābād, where the Jhelam receives the Kishangangā from the north, and itself turns sharply to the south, the distance is about 80 miles, the fall 2800 feet. The narrow valley is confined by the spurs of two mountain ranges. On the north, as was before explained, is the Kāñ Nāg Range. On the south there is a ridge which starts from the Panjál Range at a spot behind Gulmarg and continues for some 60 miles, along a great part of which length its height is from 9000 feet to 12,000 feet. The easiest road from Pūnch to Sirinagar crosses this ridge by the Hāñi Pir or Pass. The road from Marī goes over a branch of it at Danna, while the ridge itself extends, narrowing, to the sharp bend of the Jhelam River, close to Muza-

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farābād. There is a road along each side of the Jhelam Valley; that on the right bank leads to Muzafarābād and Abbotābād; that on the left bank is the one which, leaving the river after some marches, finds its way to Marl. These two are the best of all the roads out of Kashmir.

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The first 25 miles of the gorge, from Bāramūla to Uri, is through extremely fine scenery, of wooded mountain-slopes broken by cliff-surfaces, that rise to great heights above the path, while below it the river either flows in narrow rock-passages or roars over ledges and other obstacles. Some of the forest is of deodar, of which much has been felled to be sent down the stream to Jhelam, for use in the Panjāb; the logs of it are seen as one passes, now being carried swiftly down, now being hurled by the current against some rocky obstruction. Villages are met with at intervals; after Bāramūla the houses are no longer of the fashion of Kashmir, but are flat-topped. People of the Kashmiri race extend about one day's march down the valley, and after them one comes to the tribes called Kakā and Bambā, whom, in the Race Map,¹ I have classed with the Chibhālīs. The villages are upon alluvial plateaus, at a considerable height above the river; I have not traced out the origin of these plateaus—to what extent they have been made by the side streams, and to what extent by the main one. Uri, a large village, situated where the road to Pūnch branches off to the southward, is an example of the kind of situation; it is on a plain several hundred feet above the river, towards which a steep cliff is the boundary, while the side stream flows on another side in a deep narrow channel; behind are the hills, irregularly clothed with pine and deodar.

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Below this I am not well acquainted with the valley, but I know that the country a good deal resembles the tract of the Middle Mountains.

¹[cf. category 116, End Map III -- Analyst]

214 MARCH FROM KASHMIR TO LEH IN LADĀKH. [CHAP. XI.]

133^x
 ● 487 It is the great chain of snowy mountains that makes such a physical separation; and has favoured, if not induced, the other differences. The lowest Pass through these mountains naturally determines the route which of all others bears the greatest traffic between the lower countries and the westernmost part of Tibet. This lowest gap in the mountains is the Drās Pass. Our route (through this Pass) from Sirinagar to Leh is 259 miles in length, a distance which is ordinarily travelled in a march of nineteen days. Speaking generally, it is for these hills not a bad road; it is commonly passed over by laden ponies, though a few places on it are dangerous for them. I shall describe the route in five sections. The details of the stages will be found in Appendix IV.*

UP THE SIND VALLEY TO THE FOOT OF THE PASS:

SIX MARCHES.

133^x The first march is a short one, in the open Kashmir Valley, to Gāndarbal. From the city the road leads us over a plain which is at a higher level than that of the present river-alluvium; on the left there is a fall of the ground, of something less than 100 feet, down to the level of the flat marshy tract called Anchār. After 10 miles or so we come to the foot of one of the mountain spurs, and, rounding the base of it, reach Gāndarbal.

505 We are here at the mouth of the valley of the Sind River, where that valley widens to debouch into the open vale. Near above this the waters of the Sind River have divided; they irrigate the rice-fields that occupy the wider space, and below they communicate with the main river, the Jhelam. By means of these water-channels we could have come to Gāndarbal by boat, and it

* Although this is the only route from Kashmir into Ladākh, yet other roads lead into it from other portions of the hills or from the Panjāb. Of these some account will be found in Appendix IV. One of them has of late got much into use—that which leads through the British districts of Kullu and Lahol into the southern part of Ladākh, and at certain times of the year it may deserve preference; but the one by Drās, which will be described in the text, has the advantages of a less ascent, a greater number of months during which it is open, and a more inhabited country that it passes through, advantages which enable it to retain its position as the chief route from the Plains to Ladākh.

63/ complete; the country is treated as a separate *sūba* or province in the same way as it was when the Emperors of Delhi ruled over it, who governed it by an officer who was called *sūbadār*, or, for short, *sūba*. This is the most important separate charge under the Maharaja. Kashmir (with the Jhelam Valley from Bāramūla to Muzafarābād) is now divided into six districts, Kāmraj, Patan, Sīrinagar, Shapeyan, Islāmābād or Ānat Nāg, and Muzafarābād, which are administered by a staff on nearly the same plan as the Home Districts, but whose officers report to the Governor of Kashmir, and not to Jummoo direct.

The third division, separately coloured, I have marked "Out-lying Governorships." It includes the country of the Indus basin, with the exception of Zānskār, which is a part of Ladākh geographically but is attached to the Udampūr District. The three Governorships (the separation of which is marked by a line, though not by colour) are Gilgit, Baltistān, and Ladākh; these correspond to the "Non-regulation Provinces" of India as they were before legislation welded them into a more nearly homogeneous mass with the others; that is to say, special rules are issued for each according to its circumstances, and on account of the distance from and difficulty of communication with the Court more latitude is allowed to and more independent power is exercised by the Governors.

ROUTES.

487 The most frequented routes through the country are also expressed on the Political Map,² where the numbers accord with those put in the list of routes in Appendix IV. The roads are described so systematically and in such detail in the Appendix that it is unnecessary to say anything about them here, except a few words as to the order in which they are put.

The first eight are routes from the lower parts to Sīrinagar. Then there are five roads which lead out from Sīrinagar respectively to Gilgit (No. 9), Skārdū (Nos. 10 and 11), Leh (No. 12), and Kishtwār (No. 13). Nos. 14 to 17 are other roads that from various parts unite at Kishtwār. Nos. 18 and 19 are two routes
¹/₂ [cf. category 11b, End Map VI -- Analyst]

from Kishtwār to Leh; No. 20 is the route from Pālampūr in the Kāngrā Valley to Leh; and No. 21 the route from Simla by Spiti to Leh. No. 22 is a road that unites Leh and Skārdū. Then come five routes (Nos. 23-27) from Leh onwards to Yārkand. No. 28 is from Leh to Gar. No. 29 is the new trade-route, as originally planned, from Pālampūr by Chāngchenmo to Yārkand, avoiding Leh. No. 30 is a possible alternative, from Pālampūr by Kārakoram to Yārkand, avoiding Leh.

ISOMETRIC VIEWS AND SECTIONS. $\frac{2}{1}$

The object of these is to convey to the reader an idea of the vertical geography of the country. I here attempt to do so by means of three isometric views and four sections drawn transversely, at right angles to the former. These must be examined in conjunction with the General Map, the hill-shading on which will show the extension in plan of the raised masses represented in profile on the views and sections before us.

In the isometric views, I have, for the sake of showing some detail, exaggerated the vertical scale as compared with the horizontal $2\frac{1}{2}$ times. In order to correct what false impression may be made on the mind by this, I have attached below each view an outline of the same mountains on a true scale, equal to the horizontal one used above, namely, the scale of an inch to 10 miles. These outlines attempt an undistorted representation of the inequalities of ground; their datum-line is drawn on a curve which exactly proportionally represents the curvature of the earth. The views are isometric projections of the mountains as seen along three different parallel lines, the direction of which is north-west and south-east. No. 1 shows the various ranges of hills that lie between the plain of the Panjāb and the Vale of Kashmir. There are first the long lines of the Outer Hills, less than 5000 feet in elevation, then the Middle Mountains that rise to 8000 and 10,000 feet or so, and, lastly, the Panjāl and the Kāj Nāg ranges which make the boundary of Kashmir to the south-west. The second isometric view, parallel as beforesaid to the last, is taken along a line drawn through the Vale of Kashmir in its length,

APPENDIX IV.

ROUTES.

LIST OF THE ROUTES GIVEN.

N.B.—The number to each route corresponds with that attached to the same route in the Political Map.

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1. From Jummoo by Baribāl to Sirinagar.
2. From Jummoo by Budil to Sirinagar.
3. Cross route from Jummoo to Rājāori.
4. From Bhimbar by Rājāori and the Pir Panjāl to Sirinagar.
5. Cross route from Rājāori to Pūnch.
6. From Jhelam by Pūnch to Sirinagar.
7. From Mari to Sirinagar.
8. From Abbotābād by Musafarābād to Sirinagar.
9. From Sirinagar to Gilgit and beyond.
10. From Sirinagar by Deosai to Skārdū.
11. From Sirinagar by Drās to Skārdū.
12. From Sirinagar to Leh.
13. From Sirinagar to Kishtwār.
14. From Jummoo by Chanani to Kishtwār.
15. From Jummoo by Bhadarwāh to Kishtwār.
16. From Mādhopūr by Bhadarwāh to Kishtwār.
17. From Chamba by Bhadarwāh to Kishtwār.
18. From Kishtwār by Kargil to Leh.
19. From Kishtwār by Zānekār to Leh.
20. From Pālampūr in Kāngrā by Kulu to Leh.
21. From Simla by Wāngtū and Spiti to Leh.
22. From Leh by Chorbat to Skārdū.
23. From Leh by Kārākoram to Yārkanđ ; summer route.
24. From Leh by Kārākoram to Yārkanđ ; winter route.
25. From Leh by Chāngchenmo to Yārkanđ ; western route.
26. From Leh by Chāngchenmo to Yārkanđ ; middle route.
27. From Leh by Chāngchenmo to Yārkanđ ; eastern route.
28. From Leh to Gar.
29. From Pālampūr by Chāngchenmo to Yārkanđ, avoiding Leh.
30. From Pālampūr by Kārākoram to Yārkanđ, avoiding Leh.

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ROUTE 1.—From Jummoo by Banihāl to Srinagar.

(12 marches: 177 miles.)

Jummoo is 90 miles from Lāhor and 80 miles from Amritsar; the road from those two places can be traversed by carts and by camels as far as Jummoo, but not beyond.

Stage.	No.	Height above the sea in feet.	Miles from last stage.
Jummoo	0	1200	
Dansāl	1	1840	17
Kiramachi	2	2500	16
Mir	3	4800	13
Lāudar	4	4700	11
Bilaut	5	5150	14
Rāmban	6	2535	10
Rāmsū	7	4070	19
Devgol	8	5580	14
Vernāg	9	6000	15
Islāmābād	10	5600	15
Avāntipūr	11	5350	16
Srinagar	12	5235	17

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Between stages 4 and 5 the Lārū Lārī Pass, height 8200 feet, and between 8 and 9 the Banihāl Pass, 9200 feet, are crossed. Between 5 and 6 the Chināb is crossed by a wooden bridge.

This road can be traversed by laden ponies, but in many places the way is difficult for them. It is closed for all horses for two months or so from Christmas onwards, on account of the depth of snow on Banihāl Pass. For two or three days together it may be closed for men, who cannot cross that Pass when the wind is violent and the snow is deep.

ROUTE 2.—From Jummoo by Budil to Srinagar.

(12 marches: 129 miles.)

Stage.	No.	Height above the sea in feet.	Miles from last stage.
Jummoo	0	1200	
Akhnūr	1	1142	18
Kapoyankī Baulī	2		7
Paunī	3		8
Chele	4		8
Nār	5		12
Bhagolī	6		8
Budil	7		5
Delhī	8		11
Nāzim Garhī	9		14
Shapeyan	10	6715	11
Kahnūr	11		15
Srinagar	12	5235	12

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This is a foot-road, seldom or never used for laden ponies. Akhnūr is the more usual starting point for it than Jummoo. Between stages 8 and 9 the Budil Pass, a high Pass, is crossed. It is open for about seven months in the year.

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ROUTE 3.—Cross route from Jummoo to Rājāori.

(6 marches: 77 miles.)

Stage.	No.	Height above the sea in feet.	Miles from last stage.
Jummoo	0	1200	
Akhnūr	1	1143	18
Chauki Chorā	2	2150	13½
Thandāpāni	3 .. ..	.. ..	13
Dharmāla	4 .. ..	.. ..	9½
Syālsāi	5 .. ..	.. ..	9
Rājāori	6	3094	14
			77

The Chināb is crossed by boat at Akhnūr, which is on left bank. The road is fit for laden ponies. At Rājāori we come to stage No. 4 of route 4. By combining the two routes we find that from Jummoo by Rājāori and the Pir Panjāl to Sirinagar is 14 marches, 169 miles.

ROUTE 4.—From Bhimbar by Rājāori and the Pir Panjāl to Sirinagar.

(12 marches: 148 miles.)

Bhimbar is 30 miles from Gujrāt on the Grand Trunk Road. Gujrāt is 71 miles from Lāhor.

Stage.	No.	Height above the sea in feet.	Miles from last stage.
Bhimbar	0		
Saidābād	1 .. ..	.. ..	15
Naushahra	2 .. ..	.. ..	12½
Changas Sarāe	3 .. ..	.. ..	13½
Rājāori	4	3094	15
Thannā	5 .. ..	.. ..	14
Baramgalā	6 .. ..	.. ..	10
Poshiāna	7 .. ..	.. ..	10
Aliābād Sarāe	8 .. ..	.. ..	11
Hirpūr	9 .. ..	.. ..	14
Shapeyan	10	6715	6
Kahnūr	11 .. ..	.. ..	15
Sirinagar	12	5235	12
			148

Between stages 5 and 6 the Ratan Pass, 8200 feet, and between stages 7 and 8 the Pir Panjāl, a Pass 11,400 feet high, are crossed. The road is passable for laden ponies, though in some places rather difficult for them. It is open for about seven months in the year.

487
ROUTE 5.—Cross route from Rājāori to Pūnch.

(3 marches: 44 miles.)

Stage.	No.	Height above the sea in feet.	Miles from last stage.
Rājāori.. .. .	0	3094	
Thanna	1		14
Sūran	2		16
Pūnch	3	3300	14
			44

Between stages 1 and 2 the Ratan ridge is crossed at about 8000 feet altitude. Laden ponies can go by this road.

By combining route 3, route 5, and route 6 from stage No. 8 onward, we get this—From Jummoo, by Rājāori and Pūnch, to Sirinagar, 16 marches, 209 miles. By combining the first four marches of route 4 with route 5 and the last seven marches of route 6, we get—From Bhimbar, by Rājāori and Pūnch, to Sirinagar, 14 marches, 188 miles.

ROUTE 6.—From Jhelam by Pūnch to Sirinagar.

(15 marches: 186 miles.)

Jhelam is on the Grand Trunk Road, 100 miles from Lāhor.

Stage.	No.	Height above the sea in feet.	Miles from last stage.
Jhelam.. .. .	0	827	
Obechiān	1		11
Mīrpūr.. .. .	2	1286	11
Chāumuk	3		10
Biāri	4		7
Sansār	5		14
Kotli	6		15
Saira	7		14
Pūnch	8	3300	16
Kahūtā	9		9
Alīshād	10		8
Ūri	11		17
Nansahra	12		14
Bāramūla	13		9
Patan	14		14
Sirinagar	15	5235	17
			186

This road is usually practicable for laden ponies. Between stages 10 and 11 the Hāji Pass is crossed, 8500 feet high. On this the snow in winter would render it difficult, if not impassable, for ponies. For the two marches from Bāramūla to Sirinagar, boats are commonly taken.

Route 7.—From Mari to Srinagar.

(12 marches : 135 miles.)

Mari, or Murree, the well-known hill-station in the British territory, is 40 miles from Rāwal Pindi, which is on the Grand Trunk Road. Camels, post carriages, and perhaps carts, can come as far as Mari.

Stage.	No.	Height above the sea in feet.	Miles from last stage.
Mari	0	7457	
Deval	1		12
Kohāla	2		9
Chatar-Kelaa	3		9
Rārā	4		12
Tandall	5		13
Garhi	6		13
Hattī	7		10
Chakoti	8		15
Uri	9		16
Nansahāra	10		14
Bāramūla	11		9
Patan	12		14
Srinagar	13	5235	17
			163

Between stages Nos. 2 and 8 the Jhelam River used to be crossed by boat; a bridge was being constructed, which may now be ready. The road is good for laden ponies, and is always, or nearly always, open. From 8 to 12 the marches are the same as in route 6.

Till a few years ago, the road from Kohāla to Chakoti took a different in the following were the stages :

Kohāla to
Dannā
Maira

Chikar
Hattī
Chakoti

A day may thus be saved, but at the expense of some labour in going over some high hills.

Route 8.—From Abbotābād by Musafarābād to Srinagar.

(11 marches : 156½ miles.)

Abbotābād is a Cantonment and Civil Station among the hills in the Hazāra District, in the British territory.

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From Rāwal Pindī, on the Grand Trunk Road, to Abbotābād, *via* Haripūr, is 61 miles.

Stage.	No.	Height above the sea in feet.	Miles from last stage.
Abbotābād	0	4200	
Mansera	1		13½
Garhi	2		19
Muzafarābād	3		9
Hatiān	4		17
Kanda	5		11
Kathai	6		12
Shādra	7		12
Gingal	8		14
Bāramūla	9		18
Patan	10		14
Sirinagar	11	5235	17

156½

This is the easiest route from the Panjāb to Kashmir. Laden ponies can go over it without difficulty, and it is never stopped by snow.

The last two stages are usually done by water.

ROUTE 9.—From Sirinagar to Gilgit and beyond.

a. Sirinagar to Gilgit.

(22 marches : 233½ miles.)

Stage.	No.	Height above the sea in feet.	Miles from last stage.
Sirinagar	0	5235	
Sambal	1	5200	17
Bandipār	2	5200	18
Trigbal	3	9160	9
Zotkusa	4		9
Kunzalwān	5		6
Gurez	6	7800	11
Gūrikot (of Gurez)	7	9370	11
Mohu Dās	8		12
Camp	9		11
Pukarkot	10	9000	11
Chagām	11	8500	12
Gūrikot (of Astor)	12	8058	13
Astor or Hasora	13	7853	7
Harcho	14	6700	11
Mushkin	15		8
Dāiyān	16	8720	8½
Rāmgāt	17		12
Bawanjī	18	4645	9
Jagrot	19	6260	12
Camp	20		7
Atināwar	21		8
Gilgit	22	4800	11

233½

These are the stages adopted by the Maharaja's troops. Travelling lightly one may make the distance in fewer days. Thus, No. 4 may be left out; from No. 7 to No. 10 these stages may be adopted—Rashāt 16, Pukarkot 18; from No. 13 to No. 16 these—Daahkin 15, Dūiyān 12½; and from No. 19 to No. 21 the two marches can be made into one. In this way there would be 18 stages instead of 22. I have myself done the distance in 11 days.

The first two stages are usually done by boat in one night and day.

The greater part of this road, especially after No. 7, is bad for laden ponies; still they commonly traverse it as far as 17. Between Jagrot and Mināwar there are some bits that would be dangerous, but a horse without a load may be led over them.

The road is closed by snow for near six months—from the middle of November to the middle of May.

Between Nos. 3 and 4, the Rājdiāngan Pass, 11,800 feet, and between Nos. 7 and 8, the Kamri Pass, 13,160 feet, are crossed. Hatū Pir is a spur that the road goes over between Nos. 16 and 17; it is about 10,000 feet high; the descent from it to Rāmgahāt is steep and difficult.

b. Sirinagar to Gilgit; alternative route.

(23 marches: 238½ miles.)

Stage.	No.	Height above the sea in feet.	Miles from last stage.
Sirinagar	0	5235	
To Gurez (as in last route).	6		70
Bangla	7	8725	11
Māpantū	8	10130	9
Burzil	9	10740	9
Camp	10		12
Dās	11	10500	9
Gudhai	12		12
Naugām	13		8
Astor or Hasora	14	7553	12
Astor to Gilgit, as in last route, 9 marches.			
Gilgit	23	4900	86½
			<u>238½</u>

Between Nos. 9 and 10 the Dorikun Pass is crossed, 13,500 feet.

This road remains open a few weeks later, and re-opens in the spring a little earlier, than the last; it is closed for about five months for horses. During the winter even, with a favourable opportunity, it is possible for men without loads to force the Pass.

c. *Gilgit to Yasin.*

(5 marches : 80 miles.)

Stage.	No.	Height above the sea in feet.	Miles from last stage.
Gilgit	0	4800	
Shaklot	1	5580	18
Singal	2	5770	15
Gākūj	3	6920	8
Roshan	4 .. ..	.. ..	19½
Yasin	5	7765	19½
			80

This is from my own observation as far as Gākūj; beyond, from Mr. G. W. Hayward's account. The Mahārāja's frontier is crossed a few miles beyond Gākūj.

From Yasin a road leads northwards into Wakhān, part of Badakhshān, which crosses the watershed at the third or fourth march from Yasin. Darkot is the last village this side the Pass.

Another road from Yasin leads first a little way down the Yasin River, and then westward over the Shundur Pass to Mastūj and Chitrāl.

ROUTE 10.—From *Sirinagar by Deesai to Skārdū.*

(14 marches : 158 miles.)

Stage.	No.	Height above the sea in feet.	Miles from last stage.
Sirinagar	0	5235	
Sambal	1	5200	17
Bandipār	2	5200	18
Trāgbal	3	9160	9
Zotkusu	4 .. ..	.. ..	9
Kunzalwān	5 .. ..	.. ..	6
Gurez	6	7800	11
Bangla	7	8725	11
Māpanūn	8	10130	9
Durzil	9	10740	9
Sikhibach	10	13160	15
Lālpāni	11	12500	13
Uar Mar	12	13970	12
Karpitā	13	7636	16
Skārdū	14	7440 (town) ..	3
			158

Up to No. 9 the stages are the same as in Route 9 b, and up to No. 6 they are the same as in Route 9 a. Between Nos. 9 and 10 the Passes called Stakpīlā (12,900 feet), and Sarsingar (13,860 feet), are traversed. Between Nos. 12 and 13 the Burjī Pass, 15,700 feet, is crossed.

Fourteen marches are here put down, but the distance may, without difficulty, be done in twelve, by passing over stage No. 4, or No. 5, and by gaining a march between 10 and 14. 487

This road is fit for laden ponies; it is closed by snow for about six months from October or November.

ROUTE 11.—From Sirinagar by Drās to Skardu.

(19 marches: 242 miles.)

Stage.	No.	Height above the sea in feet.	Miles from last stage.
Sirinagar	0	5235	
To Taahgām, as in Route 12	9		115
Karkitchu	10		14
Gangani	11		10
Olting Thang	12		12
Tarkūti	13		14
Kartakabo	14		17
Tolti	15		12
Parkūta	16		14
Gol	17		13
Kepchung	18		17
Skardu	19	7440 (town)	4
			242

Up to stage No. 9 the road is described under Route 12. The remainder of the road is in many parts bad; it is difficult to lead a horse along it. The closing of this road by snow depends on the Drās Pass, the condition of which is spoken of in the route next below.

ROUTE 12.—From Sirinagar to Leh.

(19 marches: 259 miles.)

Stage.	No.	Height above the sea in feet.	Miles from last stage.
Sirinagar	0	5235	
Gāndarbal	1	5230	14
Kangan	2		12
Gūnd	3		14
Gegangir	4		9
Sonāmarg	5	8650	10
Baltal	6		10
Matāyan	7		16
Drās	8	9825	15
Taahgām	9	9390	15
Chānegund	10	8675	16
Kargil	11	8787 (fort)	6
Carried forward			139

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Stage.	No.	Height above the sea in feet.	Miles from last stage.
	Brought forward		139
Shargol	12	10,290	20
Kharbū	13	11,890	18
Lāmayūrū	14	11,520	16
Nurla	15		18
Sāspāl	16		17
Nimū	17		13
Pitak	18		13
Leh	19	11,500	5

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The first stage from Sirinagar may be reached by boat.

Between Nos. 6 and 7 the Drās or Zojī Pass, 11,300 feet, is passed. Between Nos. 12 and 13, the Nāmika Pass, 13,000 feet, and between Nos. 13 and 14 the Fotū Pass, 13,400 feet, are crossed. The Indus River is crossed by a wooden bridge between stages 14 and 15.

The road is fit for laden ponies during the summer, but for four or five months from December the snow on the Drās Pass renders it impassable by any but men, and makes it difficult for them.

From stage 14 to stage 19 there is an alternative route thus :

	No.	Miles.
Lāmayūrū	14 .. ..	.. ..
Khalsi	15	12
Timisgām	16	10
Tarutae	17	17
Nimū	18	10
Leh	19	18

Route 13.—From Sirinagar to Kishtwār.

(7 marches : 102 miles.)

Stage.	No.	Height above the sea in feet.	Miles from last stage.
Sirinagar	0	5235 .. ..	.. ..
Avāntipūr	1	5350	17
Islāmābād	2	5000	16
Wangām	3		17
Wankringi	4		9
Singpūr	5		16
Mughal Maidān	6	4140	16
Kishtwār	7	5450	11

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The first two stages may be done by boat.

Between Nos. 4 and 5 the Marbal Pass, 11,570 feet, is crossed. Between 6 and 7 two rivers (the Wardwan River and the Chināb) have

to be crossed by rope bridges. Horses are made to swim across, but the passage is perilous for them. But for this danger the road would do for laden ponies. It is closed in the winter. 487

Route 14.—From Jummoo by Chanani to Kishtwār.

(11 marches: 139 miles.)

Stage.	No.	Height above the sea in feet.	Miles from last stage.
Jummoo	0	1200	
Dansāl	1	1840	17
Ūdampār	2	2500	14
Balli	3		7
Chanani	4		14
Batoli	5		13
Asan	6		18
Kullen	7		15
Bheli	8		10
Jangalwār	9	4100	14
Kanani	10	3685	10
Kishtwār	11	5450	10
			139

Parts of this road are bad for horses. It is open all the year round.

Route 15.—From Jummoo by Bhadarwāh to Kishtwār.

(11 marches: 129½ miles.)

Stage.	No.	Height above the sea in feet.	Miles from last stage.
Jummoo	0	1200	
Tātānwālī Kūi	1		9
Saroin Sar	2	1825	8
Chian	3		10
Rāmāgar	4	2700	15
Korta	5		13
Dādar	6		14
Āsmās	7	9500	10
Bhadarwāh	8	5500	13
Jangalwār	9	4100	17½
Kanani	10	3685	10
Kishtwār	11	5450	10
			129½

Between Nos. 5 and 6 a ridge 8000 feet, and between Nos. 7 and 8 Soojī Pass, over 10,000 feet, are crossed.

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ROUTES.

[APPENDIX IV.]

487 The road is difficult for ponies. It is closed by snow for three months.

From No. 9 to No. 11 the route coincides with Route 14, same numbers.

ROUTE 16.—From Mādhopūr by Bhadarwāh to Kishtwār.

(10 marches: 129½ miles.)

Mādhopūr is on the left bank of the Rāvi, at the Bārī Dūāb Canal Head. It is 74 miles from Amritsar, with a good cart-road to that place.

Stage.	No.	Height above the sea in feet.	Miles from last stage.
Mādhopūr	0		
Thain	1		15
Basoli	2		12
Pud	3		13
Hartli	4		14
Lohāng	5		8
Camp	6		16
Bhadarwāh	7	5500	14
Kishtwār (see Route 15, Nos. 9 to 11)	10	5450	37½
			129½

The Rāvi River is crossed, by ford or by ferry, on the first march. Or by another route on left bank it is crossed at Basoli. Between 3 and 4 a ridge is crossed, and at 6 the Chatardhār Pass, 10,100 feet. The road is fit for laden ponies.

ROUTE 17.—From Chamba by Bhadarwāh to Kishtwār.

(8 marches: 92½ miles.)

Chamba is in the narrow valley of the Rāvi, on right bank; it is the residence of the Raja of the Hill principality of Chamba, who is under the British.

Stage.	No.	Height above the sea in feet.	Miles from last stage.
Chamba	0	3033	
Manjere	1		14
Digi or Kirah	2		10
Prungul	3		10
Camp	4		9
Bhadarwāh	5	5500	12
Kishtwār (see Route 15, Nos. 9 to 11)	8	5450	37½
			92½

Route 18.—From Kishtwār by Kargil to Leh.

487

(23 marches : 306 miles.)

Stage.	No.	Height above the sea in feet.	Miles from last stage.
Kishtwār	0	5450	
Phalme	1		6
Ekall	2		14
Banger	3		16
Hanja	4		15
Potgam	5		13
Camp	6		11
Inshin	7		9
Suknes	8		15
Dumhoi	9		9
Moskolu	10		12
Camp	11		12
Suru	12		10
Sankho	13		18
Camp	14		13
Kargil	15	8787 (fort)	13
Leh (see Route 12, Nos. 12 to 19)	23	11500	120
			306

Between Nos. 10 and 11 we cross the Bhotkol Pass, 14,370 feet. At Kargil the route from Sirinagar to Leh (Route 18) is joined.

From Kishtwār to Kargil the road is not fit for laden animals, but a horse can be led. The road is closed for about six months by the snow on the Bhotkol Pass.

Route 19.—From Kishtwār by Zānskāṛ to Leh.

(27 marches : 298 miles.)

Stage.	No.	Height above the sea in feet.	Miles from last stage.
Kishtwār	0	5450	
Bagal	1	6150	13
Piyās	2	6320	11
Siri	3	8700	9½
Atholi	4	6360	14
Kundhel	5	7660	11
Machel	6	9700	11
Bujwās	7	11570	8½
Bugjān Hivān	8	15500	7
Gaurā	9		13
Ating	10	12020	10
Carried forward			108

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Stage.	No.	Height above the sea in feet.	Miles from last stage.
	Brought forward		108
Sanī	11	11,560	9
Padam (chief place of Zana- kār)	12	11,370	9
Thondhe	13 .. ..	.. ..	9
Zanglā	14 .. ..	.. ..	12
Namtee	15	13,050	13
Pāngātee	16 .. ..	.. ..	10
Nirā	17	11,850	10
Yalchung	18	12,730	6
Phutākee	19	13,900	16
Honūpatta	20	12,400	12
Wanla	21	10,900	12
Lāmāyūrū	22	11,520	6
Leh (see Route 12, Nos. 15 to 19)	27	11,500	66
			<u>298</u>

The following Passes are crossed :

Between stages 8 and 9, Umāsi Lā or Bardhār ..	17,370 feet.
" 14 " 15, Chelang Labho ..	14,850 "
" 16 " 17, Nirā Pass ..	16,000 "
" 18 " 19, Singbo Pass ..	16,600 "
" 19 " 20, a Pass ..	16,200 "
" 21 " 22, a Pass ..	12,500 "

The road is not fit for laden animals, and it would be difficult to lead a horse along it, but this has been done. It is open for four or five months of the year only.

Route 20.—From Pālampūr in Kāngra by Kulu to Leh.

(28 marches: 857 miles.)

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[543] Pālampūr is a newly-founded town, about 4000 feet above the sea, in the centre of the Kāngra tea-district. A fair is there held each autumn, which was established to attract Yārkandī merchants from Leh by this route. In some years it has been attended by them, but, partly from irregularity in the arrival of the Yārkand caravan at Leh, and partly that this road is not open late in the year, the fair has not answered this purpose so well as was expected by its founders; still it remains a local fair of some importance.

Pālampūr is about 96 miles from Jālandhar, the nearest railway station; a cart-road joins the two places.

APPENDIX IV.]

ROUTER.

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Stage.	No.	Height above the sea in feet.	Miles from last stage.
Pilgrimage	0		
Balishah	1		10
Dala	2		13
Jathgri	3		14
Bedwani	4		15
Karun	5		16
Bulimpter (The chief place in Kulu)			
Hager	6		16
Jagat Suk	7		8
Fukham	8		10
Rakha	9		12
Kak Gur	10		10
Sim	11	10,000	11
Gandla	12		10
Kuchang (Kulung)	13		13
Kulung	14		15
Darcha	15		16
Patala	16		9
Zingringbar	17		9
Karunur Kilang	18		17
Sarcha	19		11
Sunda	20		18
Sunkiel	21		15
Tukshin	22	15,000	16
Debring	23		13
Gya	24	15,500	16
Machalung	25		23
Chumbot	26	16,500	13
Lah	27	11,500	19
			537

The following Passes are crossed :

Between stages 4 and 5, the Bedu Pass	10,000 feet.
" 10 " 11, the Rotang Pass	
" 18 " 19, the Hwa Lacha Pass	15,000 "
" 21 " 22, the Lachabug Pass	15,000 "
" 24 " 25, the Tuglung Pass	17,500 "

The Chinab River is crossed by bridge between 10 and 11, and the Indus between 27 and 28.

This road is fit for camels during the months it remains open; it is closed by snow for about seven months in the year.

It is not till between stage 10 and stage 11 that the road enters our maps. At stage 30 the road enters the Maharaja's territory.

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Route 21.—From Simla by Wāngtā and Spiti to Leh.

(34 marches: 430 miles.)

Stage.	No.	Height above the sea in feet.	Miles from last stage.
Simla	0		
Wāngtā	11		121
Dankar in Spiti	18	12,774	61
Kaja	19		16
Kiver	20	12,400	13
Jughtha	21	18,000	12
Dufong	22	16,000	16
Umdong	23		17
Narbi Bando	24	15,300	20
Kyanglung (S. end of Tamerli Lake)	25	14,900	11
Karak	26	14,900	13
Paga	27		17
Camp	28		13
Thugli	29	14,900	12
Debring	30		14
Gya	31	13,500	16
Marbaling	32		23
Chokot	33		12
Leh	34	11,500	10
			430

This road enters our maps at stage 21. From there the Passes created are:

Between stage 21 and 22, the Firing Pass	19,300 feet.
" 26 " 27, the Dabandi Pass	about 16,500 "
" 27 " 28, the Folsomka Pass	16,500 "
" 30 " 32, the Thugling Pass	17,000 "

The first twenty-four marches are in British territory; afterwards the road lies in the Maharaja of Kashmir's territory. On account of the difficulty of the Firing Pass it cannot be traversed by horses. For the same reason it is only open for a few months in the summer. The last four marches are the same as the last four of Route 20.

Route 22.—From Leh by Chokot to Shirdi.

(16 marches: 209½ miles.)

Stage.	No.	Height above the sea in feet.	Miles from last stage.
Leh	0	11,500	
Nind	1		18
Throne	2		10
Tingling	3		17
Carried forward			45

Stage.	No.	Height above the sea in feet.	Miles from last stage.
	Brought forward		45
Khalid	4		10
Skirichan	5		16
Goma Harā	6		17
Camp	7		10
Pim	8		21
Dau	9		9
Sirna	10		10
Khapala	11		7½
Karka	12		8
Kurā	13		16
Kiris	14		9
Narh	15		14
Skarda	16	7440	17
			209½

The Chorbat Pass, 16,700 feet, is crossed between Nos. 7 and 8.

This is a summer route. In winter the valley of the Indus is followed, but the road is not so good.

Route 23.—From Leh by Karakoram to Yarkand; summer route.

(35 marches: 515 miles.)

Stage.	No.	Height above the sea in feet.	Miles from last stage.
Leh	0	11,500	
Camp	1	15,000	12
Khardung	2	13,500	15
Khartar	3	10,430	12
Tigar	4	10,080	13
Panmik	5		14
Chonglung	6	11,500	13
Tutiyalak	7	13,000	13
Sar-i-Haus-i-Khoja	8	15,500	12
Dzungu Saser	9	15,400	9
Dalak-i-Murghal	10	15,100	22
Durtso	11	16,000	13
Kind Angir	12	16,700	11
Daulat Begudli	13	17,200	18
Dzungu	14	16,500	23
Wahab-High	15	16,000	19
Malikabak	16	15,300	15
Chitak	17	16,400	12
Sukat	18	13,000	18
Shahida	19	11,500	12
Yarkand	35	4,000	240
			515

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The Passes crossed are:

Between stages 1 and 2, the Khardong Pass ..	17,500 feet.
" 8 " 9, the Saser Pass	17,500 "
" 13 " 14, the Kārākoram Pass ..	18,300 "
" 17 " 18, the Suket Pass	18,200 "
And afterwards the Sānjū Pass	16,760 "
And the Chuchu Pass	11,850 "

The Shayok River is crossed by boat between stages 3 and 4, or in certain seasons it may be forded a few miles above or below the ferry.

This road is traversed by laden ponies, but it is usual to have the aid of yaks to carry their loads over the Saser and the Sānjū Passes. The road keeps open for from four to five months in the year.

From stage 8 to stage 17 there is very little grass to be got, at some stages none at all; and at some fuel also is wanting. The latter part of the route is beyond the limit of our map.

ROUTE 24.—From Leh by Kārākoram to Yārkand; winter route.*

(36 marches.)

Stage.	No.
Leh	0
Sabū	1
Digar	2
Agyām	3
Pakra	4
Chimchāk	5
Lāmakyent or Shāyok	6
Chungjangal	7
Dungyalāk	8
Mandarlik	9
Kutaklik	10
Sultān Chushkum]	11
Duhn-i-Mūrghī	12
Bulak-i-Mūrghī	13
Burtse	14
Kizil Angūr	15
Daulat Beguldi	16
Brangsa	17
Wahāb-jūlgāh	18
Malikshāh	19
Kafalong	20
Jin'balghūn	21
Bukharuldi	22
Kirgis-jangal	23
Yārkand	36

* This is taken from the Panjāb Trade Report, 1862. I have not put in the distances there given, as they are not to be relied on. The information was from Muhammad Amin, who was familiar with the road and has doubtless given the stages correctly.

From stage 13 to 19 this route coincides with stages 10 to 16 of 487
Route 23.

The Passes crossed are :

Between stage 1 and stage 2, the Digar Pass.

" 16 " 17, the Kārākoram Pass, 15,300 feet.

Afterwards the Yangi Pass, and the Tup Diwān.

This road is fit for laden ponies; it is open from November till February. There are many places where grass and fuel are scant, and some where they are absolutely wanting. The latter part of the route is beyond the limit of our map.

ROUTE 25.—From Leh by Chāngchenmo to Yārkañd; western route.

(40 marches: 610 miles.)

Stage.	No.	Height above the sea in feet.	Miles from last stage.
Leh	0	11,500	
Tikse	1		13
Chimre	2		16
Zingrāl	3		11
Tsultak	4		13
Durgo	5		16
Tānktee	6	12,800	7
Camp	7		11
Lukung	8	14,086	11
Charkang	9	16,700	14
Gunle	10	16,140	13
Tsolu (near Pamzāl)	11	14,760	12
Gogrā	12	15,500	14
Camp	13	16,500	21
Camp	14	17,000	20
Sumdo	15	17,000	25
Shinglung	16	16,700	11
Kizil Jilgāh	17	16,500	14
Khushk Maidān	18	15,600	18
Shor Jilgāh	19	15,900	14
Kāratāgh Lake	20	16,900	17
Malikabāh	21	15,800	25
Shāhdūla (see Route 23, Nos. 17 to 19)	24	11,500	54
Yārkañd	40	4,000	240
			610

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The Passes crossed are:

Between stages 3 and 4, the Chāng Pass ..	about 18,000 feet.
" 9 " 10, the Māsīmik Pass	18,200 "
" 13 " 14, a Pass	18,000 "
" 16 " 17, the Kizil Pass	17,800 "
" 19 " 20, the Kāratāgh Pass.	
Afterwards, the Suket Pass	18,200 "
The Sānjū Pass	16,760 "
And the Chuchu Pass	11,850 "

This is the road indicated by Dr. Cayley and traversed by Mr. Forsyth's party on their return journey, in 1870. It is thought to be the easiest of the roads to Yārkaṇd; it can be traversed by camels of the two-humped species; fuel and grass are wanting at two or three stages only. It would be closed in the winter.

ROUTE 26.—From Leh by Chāngchenmo to Yārkaṇd; Hayward's route.
(36 marches: 546½ miles.)

Stage.	No.	Height above the sea in feet.	Miles from last stage.
Leh	0	11,500	
Gogra	12	15,500	151
Chonglung	13		17
Nischu	14		15
Lingzhithang	15		21
Buriso	16		10½
Kārsū	17		10
Kizil Jilgāh	18		14½
Khushk Maidān	19		16
Shor Jilgāh	20		10
Oglok	21		21
Wahābjilgāh	22		10
Aktāgh	23		15½
Yārkaṇd	36		235
			546½

This road was found out and recommended by Mr. Hayward.

From Aktāgh to Yārkaṇd either the summer or the winter route (Route 23 or Route 24) may be followed.

ROUTE 27.—From Leh by Chāngchenmo to Yārkaṇd; eastern route.
(43 marches: 628 miles.)

Stage.	No.	Height above the sea in feet.	Miles from last stage.
Leh	0	11,500	
Gogra	12	15,500	151
Chonglung	13	16,700	17
Nischu	14	17,700	15
Lingzhithang	15	17,300	21
Carried forward			204

APPENDIX IV.]

ROUTES.

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Stage.	No.	Height above the sea in feet.	Miles from last stage.
	Brought forward		204
Tsothang	16	17,100	18
Lokzhung	17	17,200	16
Thaldat	18	16,300	15
Yangpā	19	16,200	30
E. Kārākāsh Valley	20	15,000	24
Shāhdāla	27	11,500	81
Yārkañd	43	4,000	240
			628

This is the road over the great plateaus; it is the one that was taken by Adolphe Schlagintweit and imperfectly described by Muhammad Amin his guide (Panjāb Trade Report); afterwards Mr. Johnson traversed it on his way to Khutan and gave a detailed Itinerary (Journal R. Geographical Society, 1867). The details of distances and heights here given, for as far as the E. Kārākāsh Valley, are from my own observation.

A diversion from or loop in this route was made by Dr. Cayley; this also I have traversed. The distances and heights are as follows:

Stage.	No.	Height above the sea in feet.	Miles from last stage.
Thaldat	18	16,300	
Patsālūng	19	16,400	20
Camp	20	15,900	21
E. Kārākāsh Valley	21	15,000	12

ROUTE 28.—From Leh to Gar.

(20 marches: 254 miles.)

Stage.	No.	Height above the sea in feet.	Miles from last stage.
Leh	0	11,500	
Chuabot	1		10
Māchalōng	2		12
Gyā	3	13,500	23
Debring	4		16
Thugji	5	14,900	14
Camp	6		12
Pāgā	7		13
Maiya	8		13
Nimā	9		12
Camp	10		17
Camp	11		17
Dora	12	13,800	10
Tashigong	17		55
Gar	20		30

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This is Lower Gar, the winter station.

467 ROUTE 29.—From Pālampūr by Chāngchenmo to Yārkaṇd, avoiding Leh.

(65 marches: 923 miles.)

Stage.	No.	Miles from last stage.
Pālampūr	0	
Māchalong (see Route 20)	26	335
Chimre	27	7
Shāhdūla (see Route 25)	49	341
Yārkaṇd	65	240
		923

Either this route or the same with a deviation to the eastward was intended as the trade-route provided for in the Commercial Treaty between the Governor-General and the Maharaja, which is given in Appendix V.

ROUTE 30.—From Pālampūr by Kārākoram to Yārkaṇd, avoiding Leh.

(62 marches: 870 miles.)

Stage.	No.	Miles from last stage.
Pālampūr	0	
Māchalong (see Route 20)	26	335
Chimre	27	7
Tagnak	28	10
Tainyār	29	20
Tsāti	30	20
Tigar	31	15
Shāhdūla (see Route 23)	46	223
Yārkaṇd	62	240
		870

This might be used as an alternative to the last if it were advisable to go by Kārākoram rather than by Chāngchenmo. Between Nos. 28 and 29 the Waris Lā is crossed, an easy Pass, 17,200 feet high, which is now fit for laden ponies and might easily be made fit for camels: it is closed by snow for three months. The distance between Tagnak and Tsāti (40 miles) can also conveniently be divided into three marches of 13 or 14 miles each.

POONCH AND JAMMU

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each with its own ruler. The depths of the valleys are alive with ice-cold babbling brooks which run over smooth, brown sandstone rocks, although here and there in the passage of the waters, there appears a jagged white limestone piece which has withstood all attempts to smooth its surface. From among them all, often from a rock island, trees spread their branches over deep pools which are frequently the resting place for many fish, the most popular being the mahseer, before they brave the rapids to swim up stream.

Foot tracks lead up from the water to lone farmhouses; here and there is to be found a wider track which cattle have made or where the loaded mule is led, for there are few roads fit for wheeled carts. Flowers grow there in profusion during the spring; small fields of corn, green in springtime, yellow in autumn, are to be discovered at odd spots, these remaining where they have been for hundreds of years. There is none of the bleakness of Ladakh, Baltistan or Gilgit, although the same steep tracks over rocks, sharp ascents and descents are there, but they are fringed by bushes, trees shade them, and just when one is feeling the need of a cooling draught, a small clear spring bursts from a rocky grassy bank. Poonch reminds the man from Britain much more of his homeland than does the Valley. The Jhelum flows through the State, as does the Poonch river; a road follows this from Kotli to the city of Poonch. It seems that in so many places camping sites are to be found, small *margs* with close-cropped grass, a stream close by and a friendly if inquisitive people soon round the camp.

It is at first surprising to find the large percentage of the men among them who speak English, then as they proudly talk of their service in the Indian Army, of their father's service and their grandfathers', many of whom are still alive and draw pensions, one remembers that this little State claims to have provided a larger percentage of army volunteers than any other in India during the Great War of 1914-18. Thousands of them have always found service in the Indian Army, returning home on pension to take over the small-holding which their father has tended against that time, he then being able to retire to gossip, rejuvenated by the stories his son has told of his own

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people. Journeying along the haphazard paths which skirt the river banks, till the sheer cliff bars the way, and the track is forced thousands of feet over the mountain-top, one feels like a child wandering in the narrow and tortuous alleys which surround some old cathedral in England.

It is impossible within the limit of this article to deal in detail with the nooks and corners where men live their hard lives and raise their poor crops in the face of extraordinary difficulties. There are interesting tracts like Padar on the southern border, surrounded by perpetual snow, where the edible pine and the *deodar* flourish, and where the sunshine is scant and the snow lies long. It was in Padar that the valuable sapphires were found, pronounced by experts the finest in the world. Farther east across the glaciers lies the inaccessible country of Zaskār, said to be rich in copper, where the people and cattle live indoors for six months out of the year, where trees are scarce, and food is scarcer. Zaskār has a fine breed of ponies. Farther east is the lofty Rupshu, the lowest point of which is 13,500 feet; and even at this great height barley ripens, though it often fails in the higher places owing to early snowfall. In Rupshu live the nomad Champas, who are able to work in an air of extraordinary rarity, and complain bitterly of the heat of Leh (11,500 feet).

Everywhere on the mass of mountains are places worthy of mention, but the reader will gain a better idea of the country if he follows one or more of the better-known routes. A typical route will be that along which the troops sometimes march from JAMMU, the winter capital, past the Summer Palace at Srinagar in Kashmir to the distant outpost at Gilgit. The traveller will leave the railway terminus on the south bank of the Tāwi, the picturesque river on which Jammu is built. From Jammu (1,200 feet) the road rises gently to Dansāl (1,840 feet), passing through a stony country of low hills covered with acacias, then over steeper hills of grey sandstone where vegetation is very scarce, over the Laru Lari pass (8,200 feet), dropping down again to 5,150 feet and lower still to Rāmban (2,535 feet), where the Chenāb river is crossed, then steadily up till the Banihāl pass (9,230 feet) is gained and the valley of Kashmir lies below.

So far the country has been broken, and the track devious, with interminable ridges, and for the most part, if we except the vale of the Bichlari, the pine woods of Chineni, and the slopes between Rāmban and Deogol (Banihāl), a mere series of flat uninteresting valleys, unrelieved by forests. It is a

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that the old bridges had weathered many a serious flood. Not long ago two of the bridges, the Habba Kadal and the Zaina Kadal, had rows of shops on them reminding one of Old London Bridge, but these have now been cleared away.

Srinagar to
Gilgit.

The distance by road from Srinagar to Gilgit is 228 miles, and the traveller can reach Bandipura at the head of the Wular Lake by boat or by land. The Gilgit road, which cost the Kashmir State, in the first instance, 15 lakhs, is a remarkable achievement, and was one of the greatest boons ever conferred on the Kashmiri subjects of the Mahārājā. Previous to its construction supplies for the Gilgit garrison were carried by impressed labourers, many of whom perished on the passes, or returned crippled and maimed by frost-bite on the snow or accident on the goat paths that did duty for roads. The journey to Gilgit before 1890 has been aptly compared with the journey to Siberia. Now, supplies are carried on ponies and the name Gilgit is no longer a terror to the people of Kashmir.

From Bandipura a steep ascent leads to the Raj Diāngan pass (11,800 feet), a most dreaded place in the winter months, when the cold winds mean death to man and beast. Thence through a beautifully wooded and watered country, past the lovely valley of Gurais, down which the Kishangangā flows, the traveller has no difficulties till he reaches the Burzil pass (13,500 feet), below which the summer road to Skardu across the dreary wastes of the Deosai plains branches off to the north-east. This is a very easy pass in summer, but is very dangerous in a snowstorm or high wind.

Descending from the Burzil the whole scene changes. The forests and vegetation of Kashmir are left behind, the trees are few and of a strange appearance, and the very flowers look foreign. It is a bleak and rugged country, and when Astor (7,853 feet) is left the sense of desolation increases. Nothing can be more dreary than the steep descent from Doian down the side of the arid Hattu Pitr into the sterile waste of the Indus valley. It is cool at Doian (8,720 feet); it is stifling at Rāmghāt (3,800 feet), where one passes over the Astor river by a suspension bridge. The old construction was a veritable bridge of sighs to the Kashmir convicts who were forced across the river and left to their fate—starvation or capture by the slave-hunters from Chilās. A little cultivation at Bunji relieves the eye; but there is nothing to cheer the traveller until the Indus has been crossed by a fine bridge, and 30 miles farther the pleasant oasis of Gilgit is reached.

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The Indus valley is a barren dewless country. The very river with its black water looks hot, and the great mountains are destitute of vegetation. The only thing of beauty is the view of the snowy ranges, and Nanga Parbat in the rising sun seen from the crossing of the Indus river to Gilgit sweeps into oblivion the dreadful desert of sands and rock. Gilgit (4,890 feet) itself is fertile and well watered. The mountains fall back from the river, and leave room for cultivation on the alluvial land bordering the right bank of the Gilgit river, a rare feature in the northern parts of the Mahārājā's dominion.

Another route giving a general idea of the country runs from west to east, from Kohāla on the Jhelum to Leh, about 5 miles beyond the Indus. A good road from Rāwalpindi brings the traveller to Kohāla, where he crosses the Jhelum by a bridge, and enters the territories of Jammu and Kashmir. The cart-road passes from Kohāla to Srinagar, a distance of 132 miles, by easy gradients. As far as Bāramūla the road is close to the river, but for the most part at a great height above it, and the scenery is beautiful. At Muzaffarābād the Kishangangā river joins the Jhelum, and here the road from Abbottābād and Garhi Habib-ullah connects with the Kashmir route. The road runs along the left bank of the Jhelum, through careful terraced cultivation, above which are pine forests and pastures. It carries a very heavy traffic, but owing to the formation of the country it is liable to constant breaches, and is expensive to keep in repair.

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From Uri a road runs south to the country of the Rājā of Pūnch, the chief feudatory of the Mahārājā, crossing the Hāji pass (8,500 feet). At Bāramūla the road enters the valley of Kashmir, and runs through a continuous avenue of poplars to Srinagar. In bygone days this route, known as the Jhelum valley road—now the chief means of communication with India—was little used. The Bambās and Khakhās, who still hold the country, were a restless and warlike people; and the numerous forts that command the narrow valley suggest that the neighbourhood was unsafe for the ordinary traveller. The construction of the road from Kohāla to Bāramūla cost the State nearly 22 lakhs.

From Srinagar to Leh is 243 miles. The first part of the journey runs up the Sind valley, perhaps the most exquisite scenery in Kashmir. Fitful efforts are made from time to time to improve this important route, but it still remains a mere fair-weather track. The Sind river thunders down the

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valley, and the steep mountains rise on either side, the northern slopes covered with pine forest, the southern bare and treeless. At Gagangir the track climbs along the river torrent to Sonā marg (8,650 feet), the last and highest village in the Sind valley, if we except the small hamlet of Nilagrar some 2 miles higher up. Sonā marg is a beautiful mountain meadow surrounded by glaciers and forests. It is a miserable place in the winter time, but it is of great importance to encourage a resident population. The chief staples of cultivation are *grim*, or Tibetan barley, and buckwheat. It is good to turn loose the baggage ponies to graze on the meadow grasses; for in a few more marches one passes into a region like the country beyond the Burzil on the road to Gilgit, a land devoid of forests and pastures, 'a desert of bare crags and granite dust, a cloudless region always burning or freezing under the clear blue sky.' The Zoji La (11,300 feet) is the lowest depression in the great Western Himālayas which run from the Indus valley on the Chilās frontier. Over this high range the rains from the south hardly penetrate, and the cultivation, scanty and difficult, depends entirely on artificial canals. The ascent to the Zoji La from Kashmir is very steep, the descent to the elevated table-land of Tibet almost imperceptible. For five marches the route follows the course of the Drās river, through a desolate country of piled up rocks and loose gravel. At Chanagund the road to Skārdū crosses the Drās river by a cantilever bridge, 4 miles above the junction of the Drās and Suru rivers, and about 8 miles farther on the Indus receives their waters. But the steep cliffs of the Indus offer no path to the traveller, and the track leaves the Drās river, and turns in a southerly direction to Kargil, a delightful oasis. Then the road abandons the valleys and ascends the bare mountains. The dreary scenery is compensated by the cloudless pale blue sky and the dry bracing air so characteristic of Ladākh. Through gorges and defiles the valley of Shergol is reached, the first Buddhist village on the road. Thenceforward the country is Buddhist, and the road runs up and down over the Namika La (13,000 feet) and over the Fotu La (13,400 feet), the highest point on the Leh road. Along the road near the villages are Buddhist monasteries, *manis* (walls of praying stones) and *chortens*, where the ashes of the dead mixed with clay and moulded into a little idol are placed, and at Lamayaru there is a wilderness of monuments. Later, the Indus is crossed by a long cantilever bridge; and the road runs along the right

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bank through the fertile oasis of Khalsi, then through the usual desert with an occasional patch of vegetation to Leh (11,500 feet), the capital of Western Tibet and of Western Buddhism, and the trade terminus for caravans from India and from Central Asia. It is a long and difficult road from Leh to Yarkand, 482 miles, over the Khardung La, the Sasser La, and the Karakoram pass of between 17,000 and 19,000 feet altitude, where the useful yak (*Bos grunniens*) relieves the ponies of their loads when fresh snow has fallen, or serves unladen to consolidate a path for the ponies.

A brief description may be given of one more of the many routes that follow the rivers and climb the mountains—the route from Leh through Baltistān to Astor on the Gilgit road. At Khalsi, where the Srinagar-Leh road crosses the Indus, the track keeps to the right bank of the Indus, and passing down the deep gorge of the river comes to a point where the stupendous cliffs and the roaring torrent prevent farther progress. There the traveller strikes away from the Indus and ascends the mountains to the Chorbit pass (16,700 feet), covered with snow even in July. From the pass, across the valley of the Shyok river, the great Karakoram range, some 50 miles away, comes into view. An abrupt descent carries the traveller from winter into hot summer; and by a difficult track which in places is carried along the face of the cliff by frail scaffolding (*pari*), following the course of the Shyok river, smoothly flowing between white sands of granite, and passing many pleasant oases, one comes to the grateful garden of Khapallu, a paradise to the simple Baltis. Crossing the united waters of the Shyok and the Indus on a small skin raft, the traveller arrives at Skardu (7,250 feet), the old capital of Baltistān. Here the mountains on either side of the Indus recede, and the sandy basin, about 5 miles in breadth, is partially irrigated by water from the pretty mountain lake of Satpura and carefully cultivated. Looking across the Indus to the north, the Shigar valley, the garden of Baltistān, with its wealth of fruit trees is seen. There the cultivator adds to his resources by washing gold from the sands of the river. From Skardu the direct route to Gilgit follows the Indus, which is crossed at Rondy by a rope bridge so long as to be most trying to the nerves, but a fair-weather track over the Banak pass lands the traveller on the Gilgit road at Astor.

It is difficult to give a general idea of a country so diversified as Kashmir and Jammu. As will be seen in the section on history, a strange destiny has brought people of distinct races,

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COMMERCE AND TRADE

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Woodcarving is practised at many places, and that turned out at Bijbihara is especially noted. The work is artistic, but suffers from the fact that the Kashmiri is a bad carpenter. Lacquered wood-work is produced at Kulgam. Woollen cloth (pattu) is woven all over the State, the best work being produced in the north, while the finished product of the south is especially famous. Blankets are made in many places, and sometimes fetch Rs. 25 a piece. The blacksmiths are very skilful, and some have been able to make surgical instruments and repair gun-locks. The city of Srinagar is noted for its silver, copper, wood-carving, and lacquer. The shawl and paper industries are almost extinct, but many of the shawl-workers have become expert weavers of carpets or have taken to embroidering felts. Good embroidery is also turned out at Islamabad. An industry started very recently, in connexion with the development of sericulture, is the weaving of silk cloth. In 1906 about 100 looms of improved pattern were imported and set up.

Commerce and trade: Up to quite recent times Kashmir was almost a self-supporting country, and the chief imports--piece-goods, metals, salt, sugar, tea, and tobacco--were of modest dimensions. Before the opening of the cart-road from Rawalpindi to Baramula in 1890, the trade was carried by Kashmiris who went down every winter to work in the Punjab, and brought back domestic requisites, or by the professional muleteers, or by Punjabi bullock-drivers. There were three trade routes. The most direct crossed the Banihal pass and ran to Jammu, the railway terminus; the most popular route followed the old imperial road over the Pir Panjal, reaching the railway at Gujrat; and the third was known as the Jhelum valley road, which is now the cart-road and the main line of communication with the Punjab.

In 1892-3 the total imports from India were valued at 48.7 lakhs. In 1902-3 the imports reached 118 lakhs, but the trade of that and later years was greatly impaired by the prevalence of plague in the Punjab. In 1904-5 the total value was 115 lakhs. The table on the next page shows the value of the more important imports in the years chosen for comparison.

There can be little doubt that Kashmir has increased enormously in prosperity of late years. The land revenue settlement has turned the agricultural classes from serfs into well-to-do peasants, and their wealth is reflected in their increased purchases. The increase in the import of salt is especially satisfactory, as in 1892 it was shown that the annual average of consumption in Kashmir was exactly half of that prevailing in the Punjab.

361 **Jammu Town.**—Capital of the Jammu province, Kashmir State, and the winter head-quarters of the Mahārājā, situated in $32^{\circ} 44' N.$ and $74^{\circ} 55' E.$, at an elevation of 1,200 feet above sea-level. Population (1901), 36,130. It lies high on the right bank of the river Tāwi, which flows in a narrow ravine to join the Chenāb. The town covers a space of about one square mile, densely packed with single-storeyed houses of round stones and mud with flat tops. In the upper portion are superior houses of brick, and in the Mandi stand the State offices and the palaces of the Mahārājā and his brother. The general effect of Jammu is striking; and from a distance the whitewashed temples, with their gilded pinnacles, suggest a splendour which is dispelled on nearer acquaintance. The most conspicuous of the temples is Raghunāthji, but like all the other buildings in Jammu it is commonplace. The Dogrās have little taste in architecture, and are essentially economical and practical in their ideas of domestic comfort.

[496] The railway, which runs to Siālkot, a distance of about 27 miles, starts from the left bank of the Tāwi. The river is spanned by a fine suspension bridge, and a good cart-road runs from the bridge as far as the Mandi. The other streets are narrow and irregular, and there is nothing of striking interest. Of late years the construction of water-works, the opening of the cart-road to the Mandi, the suspension bridge over the Tāwi, and the railway extension from Siālkot have improved the conditions of life in Jammu; but there has been no marked response either in population or in prosperity.

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● 487 In the palmy days of Rājā Ranjit Deo, towards the latter part of the eighteenth century, it is stated that the population was 150,000. There is nothing in the geographical position of Jammu which makes for prosperity. It lies on the edge of the Mahārājā's territories, with an infertile hinterland. Rightly speaking, it should have been the emporium for Kashmir commerce, but the construction of the Kohāla-Srinagar cart-road has taken trade away from the Jammu-Banihāl route. At present there are hopes of the development of coal-mines to the north, which might bring prosperity to the Dogrā capital; and the railway projected from Jammu to Srinagar would restore much business.

361 The town is situated on a hill. It may be aptly called 'the city of temples,' as every traveller is likely to be impressed with these, while approaching by road or train. The largest and the central place of worship is the temple of Sri Raghunāthji. The town was a great centre of industry in the time of the

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361 State school badly housed, and a dispensary in a building wholly unsuited to the purpose. The town has a neglected appearance. The streets are badly laid, dirty, and undrained, and there are no attempts at conservancy. Trade is brisk. It is mostly in the hands of Mahājans and Khattris. The chief articles of export to British India are grain, *ghī* from the hills and Pūnch, and minor forest products from Kotli, Pūnch, and Rājauri; the chief imports are salt, cloth, tea, and sugar.

Pūnch.—Principal place in the *jāgīr* of the same name, Kashmir State, situated in $33^{\circ} 45' N.$ and $74^{\circ} 9' E.$, at an elevation of 3,300 feet above sea-level. It lies on sloping ground above the right bank of the Tāwi. Population (1901), 8,215. The town is oblong in shape, and is unwalled, with narrow streets. There are about 750 houses, generally single-storeyed with flat mud roofs. The fort, in which the Rājā resides, stands on a mound about 300 yards from the south-west corner of the town. Pūnch is well supplied with water brought by channels from the neighbouring streams. The climate is hot in the summer, and the rice-fields in the neighbourhood are probably one of the causes of the prevalence of fever. During the five hot months it is the custom to migrate to the hills to the summer camping-ground known as Dhoks. There is a flourishing market and a large trade is done in grain and *ghī*, in spite of the fact that there are no roads in the *jāgīr* fit for cart traffic. A good six-foot road for pack transport has nearly been completed from the town to Uri on the Jhelum, and there is a project for a road to Rāwalpindi, with a suspension bridge over the Jhelum at Lachman Pātan. Other important tracks lead to Gulmarg and Tosh Maidān in Kashmir, and to Jhelum. The ancient name was Parnotsa, and the place is often mentioned in the chronicles. The Kashmiris always speak of Pūnch as Prunts.

Situation. Srinagar.—Capital of Kashmir State, situated in $34^{\circ} 5' N.$ and $74^{\circ} 50' E.$, at an elevation of 5,250 feet above sea-level. The city lies along the banks of the Jhelum, with a length of about 3 miles and an average breadth of $1\frac{1}{2}$ miles on either side of the river. Originally houses were confined to the right bank of the river, and the site possesses many advantages, strategical and economic. It is not known when the extension on the left bank took place, but the royal residence was transferred to it in the reign of Ananta, 1028-63. Modern Srinagar, on the right bank, occupies the same position as the ancient city of king Pravarasena II, who ruled at some period of the sixth century. Kalhana, in his famous chronicle, says that the

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THE KASHMIR ARMY

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well-known gallantry of the Dogra race, the rulers in Kashmir seemed determined to restore order on the frontier, and to wipe out the disgrace which had been inflicted on their arms. 701

Ignoring the enormous natural difficulties of the country, the villainous state of the existing tracks—roads there were practically none, when once the valley of Kashmir was left—and the conditions under which an expedition on its frontier must be carried on, the Durbar all through the spring and summer of 1888 poured thousands of men towards Gilgit. The army was without a trained general, had no staff, no proper transport, commissariat, medical, or ordnance departments, and was in short a mass of armed men without the semblance of organisation. The operations at Gilgit against the Hunza-Nagar tribesmen were to be directed by a committee of generals and sirdars, assisted by the Governor of Gilgit. Such an arrangement would elsewhere have been recognised as ensuring the failure of any military operations. As a matter of fact there was in the end no fighting, which was a mercy, considering the condition of the Kashmir army. The Durbar built a golden bridge for its revolted vassals, peace on the frontier was temporarily patched up, and the Kashmir troops, with the exception of the usual garrison, were withdrawn from Gilgit by the autumn. 701 721 [487]

After paying a farewell visit to the Maharaja, we started in one of His Highness's house-boats for Bandipur, the place on the Woollar Lake from which the road to Gilgit starts. The distance between Bandipur and Gilgit is about hundred and ninety miles. 487

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At Bandipur we were met by two officials of the Kashmir State, who had been deputed to accompany me—the one with strict injunctions never to lose sight of me for a moment wherever I might go, the other with orders to see me as far as Gilgit. A guard of twenty Kashmir sepoy, Dogras of one of the best regiments, had also been told off as my escort. I had, in addition, four Pathan orderlies belonging to my regiment, the Central India Horse. They were picked men of tried gallantry, true as steel, worthy of the implicit trust I placed in them. The baggage of the party was carried by coolies, the roads not being suitable for animal transport.

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The second of the Kashmir officers was a charming companion, a Hindoo gentleman of the old school, who had passed much of his life at the Kashmir Court. Bright, always cheerful, with a supreme contempt for the savage people among whom we were to spend our time, and also it must be allowed for the beauties of their wild country, he invariably saw the amusing side of life, and was ready to extract some fun out of the difficulties and mishaps of frontier travel. We became the greatest friends, and spent hours in endless talk. The last time I saw him his humour was a trifle gruesome. He came to take leave of me, and told me with much glee how the Brahmin astrologer whom he had consulted about his return to Kashmir had fixed the lucky day for his start, but had not been able to foresee his own departure on a longer journey. The unfortunate

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man had died of cholera that morning. From Bandipur the road runs straight out of the valley over the Tragbal pass, the highest point of

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THE TRAGBAL PASS

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which is about twelve thousand feet. Our first camp was at an altitude of over nine thousand feet in a glade in the pine forest, the turf covered with blue forget-me-nots. The march up was lovely, through one succession of copses of jasmine and scented wild rose, the latter of all colours from white to dark red. Close to the camp we came on the first signs of the army which had preceded us—a line of graves of men who had died of cholera. The troops and coolies were said to have suffered much from this scourge, and we arranged to avoid their camping grounds in future. The following morning we continued our march, the road winding up through pine forest till the rounded tops of the watershed were reached. We halted for an hour at the top, surrounded by a wilderness of flowers, blue gentian, anemones, acres of white and yellow blossoms bordering the wreaths of snow, masses of small pink alpine flowers, wild rhubarb and sorrel in profusion, and patches of dwarf juniper, for we were well above the pine and birches. The views from here are lovely—to the left, steep pine-clad slopes descend into the famed Lolab valley, behind, stretched out thousands of feet below, lie the valley of Kashmir and the blue sheet of the Woollar Lake, backed by the snowy range of the Pir Panjal; to the right stand the great square peak and snow-fields of Haramukh; in front, a hundred miles away, towers Nanga Parbat, from which on both hands as far as the eye can reach tossed ranges patched with snow fill up the picture.

I had an example on reaching camp this day of the extraordinary carrying power of the Kashmiri coolie; my tent was late coming up, and when it

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THE GURAI VALLEY

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65/ were lent to the Durbar for this purpose by Govern-
 66/ ment. The villagers are no longer liable to be
 dragged out for forced labour if they do not satisfy
 the extortionate demands of tax collectors and plun-
 dering officials. But it will take many a long year
 before the Kashmiri becomes a man.

● 487 The next few marches are up the valley of the
 133 Kishengunga, one of the most beautiful in Kashmir.
 137 The road runs for the most part near the river,
 through fir forest and thickets of deciduous trees and
 bushes, amongst which the white Persian lilac and
 wild roses show in great profusion. At the lower end
 of the valley is a splendid grove of branching poplars,
 beyond which, near Gurais, are a few miles of open
 cultivation and stretches of meadow land. The steep
 hill sides for the most part, however, close in on the
 river; the slopes facing north covered with forest,
 those facing south bare of trees but grass-grown, as is
 usual in the Himalayas, where the summer sun burns
 up the southern exposed slopes too much to permit
 of young woods growing. The mountains rise in
 grand peaks, broken into precipices hung with fir
 and birch, and interspersed with alpine meadows.

133 The height of the Gurais valley is about eight
 thousand feet, and the climate as near perfection in
 spring, summer, and autumn as can be found on earth.
 000 We habitually marched early for the sake of the
 coolies, starting any time after four or five, stopping
 to breakfast at some tempting spot, where we would
 spend most of the day reading or wandering off the
 road in search of views and game, and finally reaching
 camp some time in the afternoon. It was the exist-
 ence of the nomad, the charm of which once tasted

000 works like madness in the blood, and suddenly fills the sufferer, when mewed up within the four walls of a house, with a wild longing to be away, wandering, it matters not where. I had my fill of it for five years, and nothing comes up to it for pure enjoyment.

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The road out of the Gornia valley is either by the Kamri Pass or the Burzil. We chose the former, as by it the distance to Astor is about a march shorter. The road over the Kamri leaves the valley at the village of Bangla, goes straight up the side of the hill, and crosses the ridge at an altitude of over thirteen thousand feet. The ascent is very severe, but on the other side the descent is gentle. We camped on both sides of the pass just below snow level in most delicious air, like Northumberland in clear autumn, and again our marches were through miles of flowers, acres of spirea, and thickets of roses in full bloom.

The road requires but little description. Across open downs or grassy slopes it was simply the foot-path worn by men and animals. In narrow valleys it wound in and out, now at the level of the stream, again a hundred feet up, over boulders, stone staircases, and along shelves of rock, anywhere and everywhere, so long as man and beast could find a foothold. Perhaps a quarter of the length of the road may be said to have been made, the rest had evidently "grown."

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As we dropped down towards Astor the valley we were in deepened, and was crowned by perpendicular cliffs broken into the most fantastic shapes. We began now to get occasional glimpses of Nanga Parbat, 26,620 feet high, which dominates this part of the

the country's resources and in the expansion of trade. 175
Another brother of the Maharaja, Raja Ram Singh was for 648
several years the Commander-in-Chief of the State forces. 643

In 1877, a British Officer had been stationed as Political Agent at Gilgit. He had been withdrawn in 1881, 175
but in 1889 the Agency was re-established. The Agency 648
comprised the chiefships of Hunza and Nagar and the
governorships of Punial, Yasin, Koh-Ghizr and Ishkoman.
Hunza and Nagar, separated from each other by a river,
are in the extreme north of the territory. The inhabitants
of the former are mostly Muslims and of the latter Sikhs.
In 1885, the Kashmir garrisons at Chaprot and Chalt
were attacked. When the British Political Agent,
Colonel Durand, visited Hunza and Nagar in 1889, the
chiefs made an apparent submission, but they failed to
keep the conditions agreed upon. Hostilities broke out,
and after some fighting, Hunza and Nagar were occupied
by a combined force of the British India and the State
troops in 1891. The Chief of Nagar was reinstated
by His Highness' Government. But the Chief of Hunza
fled to Chinese Turkistan, and his half brother,
Safdar Khan was installed in his place.

The Sialkot-Jammu Railway was opened to traffic in 496
1890. The Jhelum Valley Cart Road, 132 miles long, 491
which had been commenced in the time of Maharaja
Ranbir Singh, was completed in the early nineties. The
part of it between Kohala and Baramulla (98 miles) had
been opened in 1889. The road connects Srinagar with
Kohala. A bridge at Kohala joins His Highness' territory
with British India, and from the bridge runs a 64 miles
road through Murree to Rawalpindi. The construction of
the Banihal Cart Road is another achievement of the late
Maharaja's reign. Its importance lies in the fact that it
connects Srinagar, the summer capital of the State with
Jammu, the winter capital, which is also a railway station,
without passing through British Indian territory. The two
routes together with their branch roads form one of the
finest systems of mountain roads in the world.

A few words about the old routes to Kashmir appear 487
to be necessary here. The Murree route from Deval to
Baramulla consisted of eleven marches. Deval could be
reached by cart from Rawalpindi. It was usual to take a
boat at Baramulla for Srinagar. But even this short
journey took more than 24 hours. Then there was the

- 487 Pir Panjal route. In the reign of Maharaja Ranbir Singh, visitors generally used this way. It had been the favourite route of the Mughal emperors and nobles, and the remnants of the Mughal *sarais* are still to be met with almost at every halting place. The nearest railway station for this route is Gujrat. The distance from Gujrat to Bhimber, which was about thirty miles, could be covered by cart. From Bhimber, Srinagar could be reached in 12 marches of 10 to 15 miles each. The high Pir Panjal range had to be crossed on this route. Thana Mandi lay at a distance of 70 miles from Bhimber. A traveller could take the Poonch route from Thana Mandi and complete the journey in 8 marches by way of Uri. This was, however, difficult and not much favoured.

491 It will thus be seen that the construction of the two roads connecting the Punjab with Srinagar was no mean achievement. Lakhs of rupees were spent on the *pucca* bridge road to Gilgit. Another bridge road connected Srinagar with Leh in Ladakh. Considerable expenditure was incurred on the maintenance and repairs of these roads, all of which passed through difficult mountainous countries. In 1894, the postal service of the State was amalgamated with the imperial service, and in 1897, 205 498 His Highness' Government entered into an agreement for exchange of services between the State and the Imperial telegraph systems.

451 In 1887, His late Highness requisitioned the services of a British Officer from the Government of India for the purpose of land settlement. But the real credit for the settlement must go to Mr. (afterwards Sir) Walter Lawrence, who was appointed Settlement Commissioner in 1889, and who brought great sympathy and understanding to bear on his task. The first settlements in Jammu and Kashmir were completed in seven years. The settlement of Astore and Gilgit was completed in 1894. The main features of Mr. Lawrence's work which had the complete approval of His late Highness and the State Council were :—

- (a) The State demand was fixed for 10 years.
- (b) As a first step towards substitution of payment in cash for payment in kind, the proportion of the latter was so fixed as to cause the least hardship to the cultivators and maintain the confidence of the city population.

PRICES AND WAGES

lower tracts. The Ranbir canal was thrown open in the Jammu Province but its effect on population were naturally show themselves in the subsequent decades. Percentage increases of 5.3 and 11.3 for Jammu and Kashmir Provinces and 8.6 for the entire State for the decade is quite reasonable and reliable.

1911-1921.—The normal rainfall was generally better than in the previous decade. The condition of crops in the State during the decade was about the average on the whole with the exception of the extraordinarily dry year 1920 which caused serious distress in some tahsils of the Jammu Province. The greatest suffering was occasioned in the tahsils of Kotli, Mirpur, Samba and Poonch Ilaqas and in a slightly lesser degree in the tahsils of Kishtwar, Ramnagar, Ramban of the Udhampur district. Liberal Taccavi advances were made through the Co-operative Department in the district of Mirpur for purchase of grain and cattle, among whom the mortality was very heavy, owing to dearth of fodder and desertion of the population to neighbouring districts in search of livelihood. State efforts supplemented by private charity succeeded in averting a famine. The adverse effects of this long drawn suffering had an important bearing on the movement of population in the affected tracts. The total amount of Revenue suspended during the decade was Rs. 106,987 of which Rs. 120,760 was suspended in the Jammu Province.

The suspensions in the Frontier Districts and Kashmir Province amounted to Rs. 5,623 and Rs. 70,604 respectively while remissions throughout the State aggregated to Rs. 21,000.

Irrigational Extensions.—The decade witnessed an increase in the number of canals by 2, in total mileage by 60 and in irrigated area by 15,652 acres which is a fairly satisfactory record of decennial improvement, greater share of improvement falling to the lot of Jammu Province as in Kashmir the natural water courses fed by snows require little further help by artificial means. In Jammu the Ranbir canal with 6 distributories was completed in 1912; the Basantpur canal in Kathua district was completed in 1917 and Ujh canal was started in 1919, while 8 distributories from Upper Jhelum canal were laid out in Mirpur in 1916.

Public Health.—Out of the total 88,294 deaths during the decade influenza levied the heaviest toll (44,514 deaths) by causing 50 per cent. of the total mortality in 1918 and the disease held sway over both the provinces. Kashmir was free from Plague while Jammu had 9 visitations of this epidemic resulting in the total mortality of 9,134 persons in the decade. Cholera did its usual havoc in Kashmir and took away 18,064 lives—the 1919 attack being the most virulent. Small-Pox inflicted considerable mortality both in Jammu and Kashmir Provinces, the total number of deaths being 16,405. It is regretted that the absence of reliable vital statistics renders comparison with the past Census difficult.

Prices and Wages.—The exceptional feature of the decade was the abnormal rise in prices and wages during the War and the Post-War years as against the easy prices and steady conditions prevailing prior to 1914. The prices of food stuffs increased by 150 to 200 per cent. on account of the War and the wages of artisans and labourers were universally more than doubled. A man who received a daily wage of -/8/- could not be had for less than Rs. 1 or even Rs. 1/4/-.

Apprehending that the export of large quantities of food grains from the State to outside places where higher prices were obtainable will lead to considerable famine conditions the State had to place an embargo on the export of wheat, maize and rice. It is, however, unfortunate that the number of deaths in the War is not given in the Report as the absence of the able-bodied population from their homes for a period of five years and the deaths of a large number of men before the war, of course, affect the p. 209, category 116 -- Analyst]

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CHAPTER XVI.

TRADE.

CHAP. XVI.

THE Kashmir valley, owing to its remoteness from the railway and to its difficult approaches, has been thrown on its own resources, and is to a great extent a self-supporting country. In normal years the food supply of the valley is ample for its inhabitants; for clothing the people have wool and a certain amount of locally-produced cotton of a fair quality. There is a wealth of fibres, ample timber, and with the single exception of salt there is no necessity of life which need be imported. Iron locally produced used to suffice for agricultural implements, and clay vessels serve all the purposes of copper and brass in domestic life. But in spite of difficulties of communication with the Panjab, and of the fact that Kashmir is practically a self-supporting country, inhabited by a people who are singularly free from extravagant tastes, a trade has sprung up which will probably increase largely. The genesis of this trade lay in the circumstance that a certain proportion of the able-bodied men of Kashmir went down to the Panjab every year after the autumn harvest was reaped, carrying with them local produce for sale, and these men never returned empty-handed. Many used to go down to work as coolies in the Panjab during the winter, and their wages were always spent on the purchase of commodities which were light to carry and which would either be used by their families or sold to others. Besides this trade, which was carried on the backs of the Kashmiris, there was the trade carried by the professional muleteers or *Makhidas*, a class which has always existed in Kashmir, and the trade which Panjab bullock-drivers transacted.

Three routes were followed by trade. Of these the most direct was *Roshan*, the road which crossed the Banihal pass and ran to Jammu; the most popular with the pony men was the old imperial road which ran over the Pir Pánjál and reached the railway at Gujrat, and the third was the route known as the Jhelum valley road, which ran along the river Jhelum from Baramulla to Kohala.

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CHAP. XVI.

Jhelum valley
cart-road.

In September, 1890, the road from Baramula to Kohala was opened to cart traffic, and the immediate result was that trade deserted to a certain extent the Banihal and Pir Pánjál routes. But as a trade route the Jhelum valley road has up to the present disappointed expectations. It is frequently closed for months together, owing to heavy landslips, and carriers find that the cost of fodder along the line is a serious obstacle to their business. The heavy expenses entailed by the construction of the Jhelum valley road and its maintenance have prevented the Durbar from keeping the Banihal and Pir Pánjál routes in good order, and it is quite possible that until the Jhelum valley road hardens into a permanent and safe thoroughfare, with bridges capable of carrying heavy carts, its construction will not lead to an appreciable or steady increase of trade. Further, unless the alternative routes are kept in good repair, it is possible that the trade between Kashmir and the Punjab may diminish.

Total trade.

The following table shows the exports from Kashmir to the Panjab, and the imports from the Panjab to Kashmir. The figures are taken from the Panjab trade reports, and as railway communication between Kashmir and the Panjab has been much discussed of late, I have added statistics showing the trade between Ladákh and the Panjab, surmising that if Srinagar is linked with the railway all the trade with Ladákh and Yarkand will pass through Kashmir, or at any rate through Gilgit. The figures given by the Panjab trade reports deal not only with the valley of Kashmir, but include the trade of Jammu territory. It has been calculated that Kashmir proper accounts for half the trade shown in the table, but if one looks to the population of the various divisions of the Kashmir State, it would seem that Kashmir proper is given a larger share than would be justified by census statistics. The population of Jammu territory, according to the census of 1891, amounted to 1,439,543. The population of Kashmir proper amounted to only 814,241. Even if the through trade to Skardu and Gilgit be included, and their population of 127,094 be added, we should then have a population of 941,335, which is still less than half. It is unfortunate that exact figures cannot be given for the Kashmir valley, as distinguished from the rest of the territories of His Highness the Mahárájá of Jammu and Kashmir, but a fairly accurate idea can be formed of the trade of the valley, based partly on the figures shown in the statement and partly on local information obtained in Kashmir.

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Fig. 64.—POTWAR TO LADAKH: BLOCK SECTION OF KASHMIRI HIMALAYAS. Line of confluence; vertical exaggeration 8-3. Geology (based on de Terra) diagrammatic: 1, Siwaliks; Permian-Cretaceous in NE; 4, older Palaeozoic; 5, younger Palaeozoic igneous; 6,

(64-4)

and Wadia considers it as the front of a great Kashmir nappe. The massive Permo-Carboniferous limestones, metamorphics, and intrusives form a broad swelling platform at about 13,000 ft, on which lies a serrated residual crest, the highest monadnocks reaching 15,500 ft. The passes lie as a rule at 11,000-12,000 ft.

The contemporary glaciation presents interesting features. Most of the thirty-odd small glaciers are on the Nn slope, in contrast to the Himalayas farther E where there is relatively little ice on the arid Tibetan side. The Pir Panjal snow, however, comes mostly in winter, from W or NW, and the Sn aspects are more exposed to warm air-currents from the plains. Only one or two of these glacierets have real valley tongues, the lowest at 11,600 ft; most of them are simply cakes of ice in wide cirques which form the collecting grounds. The river-pattern is very striking, with the great bends of Chenab and Jhelum (the latter controlled by the syntaxis), the tributaries at these bends carrying on the line of the lower main streams, and a general lay-out of feeders suggesting that the drainage was originally to the SE.

The Sn flank is wetter than the Nn, but slopes here are so often too steep for soil formation that the larger coniferous forests are mostly to the N. The SOI I. 1/2,000,000 maps carry the Pir Panjal across the Chenab, the upper (Chandra Bhuga) Valley being closely inset in the angle of the Pir Panjal and the main Himalaya. The lower levels of this high basin (6000-12,000 ft) in the W carry a fair population; the density of Udhampur Dt is 58, and unlike the rest of Jammu it increased slightly from 1931 to 1941. The climate here is definitely cold, "the mango-tree gives place to the apple"; but terraced irrigation is not too difficult, and rice is important.

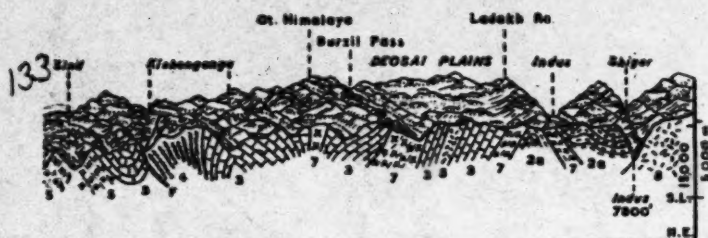
The region is, however, essentially negative, a barrier. Of the routes into the Vale the most direct is the old Mogul road by the Pir Panjal Pass (11,400 ft), which gives its name to the range. This is now of little importance, the main entry (in normal times) being by the motor road up the

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THE HIMALAYAS: KASHMIR AND KARAKORAM



section on bearing 38° for 430 miles (690 km.) from Jhelum town to Indus below Shyok 2, Murree; 2a, Flysch; 3, Permo-Carb. (thrust onto 2), and 'Tethys' formations (U, Karewas Beds; 7, Cret.-Eocene eruptives; 8, granites. F, major faults and thrusts.

[FIG. 64-B]

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Jhelum valley—excellent engineering but costly to maintain. At the other end of the Vale access is had from Jammu and the Chenab via the Banihal Pass (9290 ft), also motorable though with more interruption by snow than the road from Rawalpindi. Military and political needs have led to the hasty construction of a long projected direct link with India by the Banihal, the last stage on the road from Gurdaspur through Kangra and Chamba in the sub-Himalayan Punjab.

The Vale of Kashmir

The Physical Setting

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Between the Pir Panjal and the main Himalaya lies the famous Vale of Kashmir, a great basin about 85 miles by 25 with a floor which in the Jhelum floodplain is only 5200 ft above sea-level. Wadia and de Terra agree in regarding it as a great synclinal, which according to Wadia is seated on the back of a vast nappe.* The Sn flanks fall relatively regularly and gently from the Pir Panjal crest, but the Jhelum thalweg lies close to the Nn side of the Vale, and here faceted spurs give a clear indication of faulting; similar features on the Pir Panjal slope are as a rule masked by the Pleistocene deposits. The stream pattern is interesting. The Nn wall is dissected by the Sind and other rivers which are antecedent to the immediately bordering hills; but beyond the ridge crowned by Haramukh (15,999 ft) the NW end of the valley shows a well-adjusted synclinal pattern, significantly "rather suggestive of an ancient headwater portion of a master stream".¹⁰ On the Pir Panjal side the upper valleys are incised and dendritic, but farther down the rivers have developed on parallel courses, consequent on the uplift of the Karewas Beds and antecedent to the folds in them. As we are about to see, the geomorphological evolution is extremely recent.

Among the most striking features of the Vale are the flat-topped ter-

* Cf. Fig. 34 in Wadia, *op. cit.* (1920), 215.

¹⁰ de Terra, 23.

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INDIA AND PAKISTAN

433 have a high standard of durability. The supply of hides and skins was large, as the Hindu orthodoxy of the ruling house prohibited cow-slaughter and so inflated the numbers of cattle. The production of high-grade rag paper was once important, but has declined before the growth of the Indian mill industry. Finally we may note the importance of water-borne traffic: much of the provisioning of the city is done by flat-bottomed boats, 50-60 ft long and drawing 2 ft or so, which can carry up to 30 tons of cargo. The boatmen, particularly those who man the tourist house-boats, have a reputation for supplementing licit earnings by following the world's second oldest trade.

505 Much of the importance of the Vale, and hence of Srinagar, lies in its function as a staging-base on the Himalayan routes. The Sn entries have already been mentioned; to the NW the road to Gilgit and the Oxus lies across the Raj Diangan Pass (11,800 ft) into the Kishen Ganga Valley and then by the Burzil (13,755) into Astor; both these passes not without danger in winter. But the most important trade route, leading either up the Indus into Tibet or across the Karakoram into Sinkiang, is that to the NE by the Zoji La. At 11,578 ft this is the lowest col on the main W Himalayan axis, a pass of the Maloja type with the steep ascent on the S: this is due to the Sind cutting back into the headwaters of the Dras, which lies on the drier side of the mountains and has much farther to go before it reaches 5200 ft, the local base-level of the Sind.

161 If anywhere on earth presents the semblance of the Happy Valley of
439 *Rasselas*, it is the Vale of Kashmir; but however pleasant the prospects, the
661 human history of the region has been, on the whole, vile. To begin with, it is probably over-populated; density in Anantnag (Srinagar) Dt is 303 (and of course far higher in relation to cultivated area), and it is significant that sugar and grain come next to cotton goods in the Kashmiri import list. Beyond this it is hardly an exaggeration to say that the whole history of Kashmir for the last few centuries has been one of misgovernment and oppression, often deliberate, of the peasantry for the benefit of narrow Court cliques; nor was this tradition dead in this century. At this point it is probably appropriate to discuss the present Indo-Pakistani conflict.

THE KASHMIR DISPUTE

631 'The trouble in Kashmir' stems finally from the simple fact that a popu-
668 lation 77% Muslim was ruled by a family of the strictest Hindu orthodoxy, descendants of a particularly able and ruthless *condottiere* under the Sikhs, Gulab Singh of Jammu, who 'mediated' between British and Sikhs to his own profit. It is safe to say that at no time in the century's existence of the state have relations between the dominant Dogra Rajputs of Jammu and the Muslim majority been other than those of exploiters and exploited, to such an extent that until quite recently agricultural progress was still